REVISION HISTORY BG2T CHASSIS

MODEL

KV-PG14N70

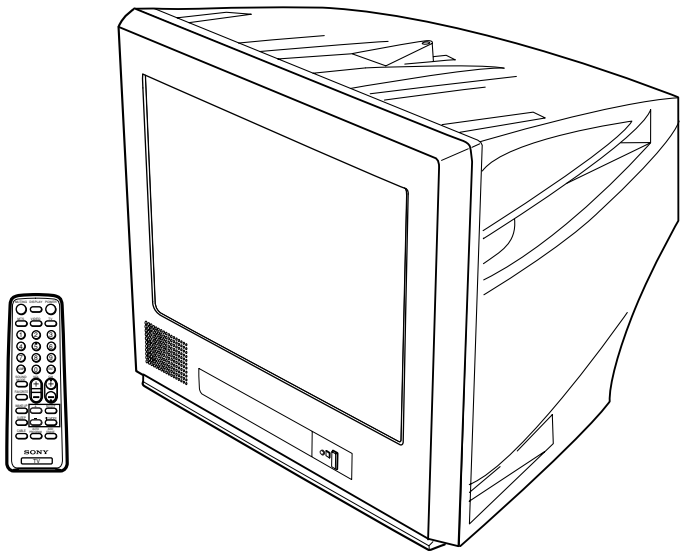
PART NO.: 9-872-275-01

NO.	SUFFIX	DATE	SUPPL. / CORR	DESCRIPTION
1	-01	2001/11	--	1st. Issue

Self Diagnosis
Supported model

SERVICE MANUAL BG2T CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-PG14N70	RM-915	Taiwan	SCC-U77B-A				



TRINITRON® COLOR TV

SONY®

SPECIFICATIONS

			Note
Power requirements	110 V AC, 60 Hz		
Power consumption (W)	Indicated on the rear of the TV		
Television system	M		
Color system	PAL*, PAL 60*, NTSC3.58, NTSC4.43*		*AV IN only
Channel coverage	VHF: 2 to 13 UHF: 14 to 69 CATV: 1 to 125		
(Antenna)	75-ohm external terminal		
Audio output (Speaker)	3W		
Number of terminal			
VIDEO	Input: 2* Output: 1	Phono jacks; 1 Vp-p, 75 ohms	*One input line available
AUDIO	Input: 2* Output: 1	Phono jacks; 500 mVrms	*One input line available
(Earphone)	Output: 1	Monaural minijack	
Picture tube	14 in		
Tube size (cm)	37		Measured diagonally
Screen size (cm)	34		Measured diagonally
Dimension (w/h/d,mm)	375 x 346 x 411		
Mass (kg)	12		

Design and specifications are subject to change without notice.

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SELF DIAGNOSTIC FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER lamp will automatically begin to flash.
The number of times the lamp flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER lamp flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the remote commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

1. DIAGNOSTIC TEST INDICATORS

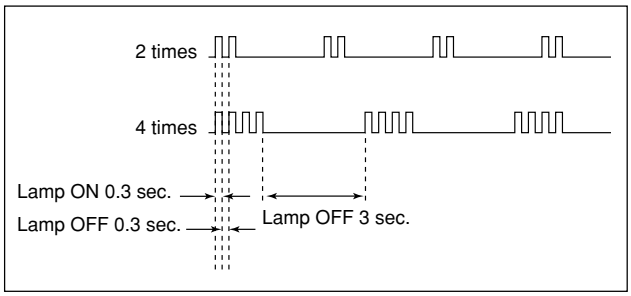
When an errors occurs, the STANDBY/TIMER lamp will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

Result for all of the following diagnostic items are displayed on screen. No error has occured if the screen displays a "0".

Diagnostic Item Description	No. of times STANDBY/TIMER lamp flashes	Self-diagnostic display/Diagnostic result	Probable Cause Location	Detected Symptoms
• Power does not turn on	Does not light	—	• Power cord is not plugged in. • Fuse is burned out F4601 (F)	• Power does not come on. • No power is supplied to the TV. • AC power supply is faulty.
• +B overcurrent (OCP) • Horizontal deflection overdrive	2 times	002:000 or 002:001~255	• H.OUT Q801 is shorted. (A board)	• Power does not come on. • Load on power line is shorted. • Has entered standby state after horizontal raster. • Power line is shorted or power supply is stopped.
• White balance failure (no PICTURE) • Vertical deflection stopped	4 times	004:000 or 004:001~225	• -13V is not supplied. (A board) • IC 551 faulty (A board)	• Vertical deflection pulse is stopped
• Micro reset	—	101:00 or 101:001~225	• Discharge CRT (C Board) • Static discharge • External noise	• Power is shut down shortly, after this return back to normal. • Detect Micro latch up.

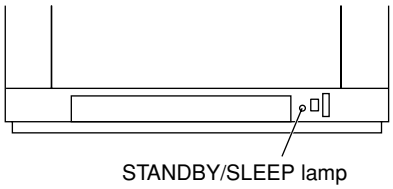
Note 1: If a + B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously.
The symptom that is diagnosed first by the microcontroller is displayed on the screen.
Note 2: Refer to screen (G2) Adjustment in section 3-4 of this manual.

2. DISPLAY OF STANDBY/TIMER LIGHT FLASH COUNT



Diagnostic Item	Flash Count*
+B overcurrent/overvoltage	2 times
Vertical deflection stopped	4 times

* One flash count is not used for self-diagnostic.



3. STOPPING THE STANDBY/TIMER FLASH

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER lamp from flashing.

4. SELF-DIAGNOSTIC SCREEN DISPLAY

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurances of failure for confirmation on the screen:

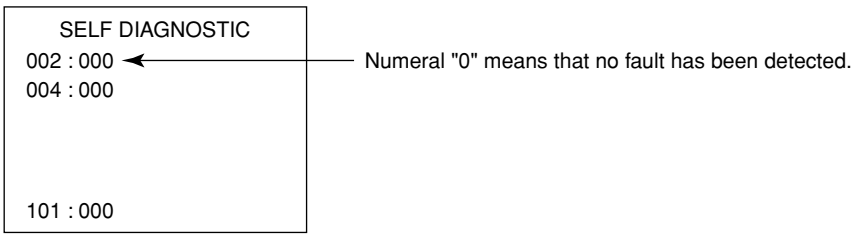
[To Bring Up Screen Test]
In standby mode, press buttons on the remote commander sequentially in rapid succession as shown below:

Screen display ➡ channel 5 ➡ Sound volume - ➡ Power ON

⇧

Note that this differs from entering the service mode (mode volume +).

Self-Diagnosis screen display



5. HANDLING OF SELF-DIAGNOSTIC SCREEN DISPLAY

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.

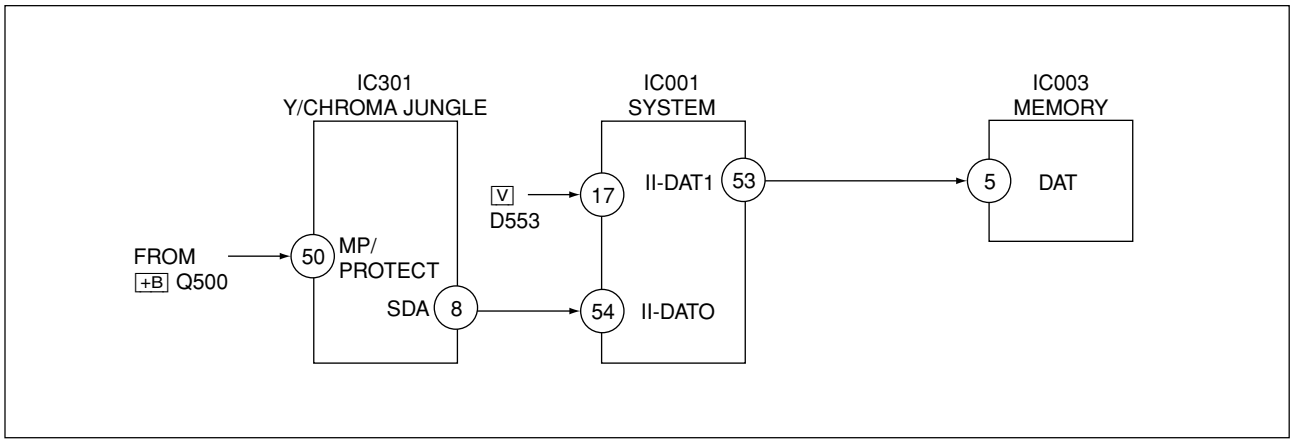
Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

[Clearing the result display]
To clear the result display to “0”, press buttons on the remote commander sequentially as shown below when the diagnostic screen is being displayed.

Channel [8] ➡ 0

[Quitting Self-diagnostic screen]
To quit the entire self-diagnostic screen, turn off the power switch on the remote commander or the main unit.

6. SELF-DIAGNOSTIC CIRCUIT

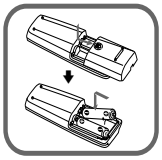


[+B overcurrent (OCP)]	Occurs when an overcurrent on the +B(135) line is detected by Q500. If Q500 go to ON and the voltage to pin 50 of IC301 more than 3.5V when V.SYNC is more than seven verticals in a period, the unit will automatically turn off.
[Vertical deflection stopped]	Occurs when an absence of the vertical deflection pulse is detected by Pin 17 and IC001 shut down the power supply.
[White balance failure]	If the RGB levels* do not balance or become low level within 5 seconds, this error will be detected by IC301. TV will stay on, but there will be no picture. * (Refers to the RGB levels of the AKB detection Ref pulse that detects IK.)

The operating instruction mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

SECTION 1 GENERAL

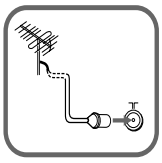
A 準備工作



步驟 1

將所提供的電池裝入遙控器。

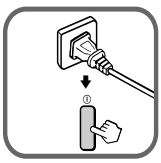
注
- 請勿使用舊電池或同時使用不同類型的電池。



步驟 2

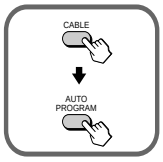
將天線電纜（未提供）連接至電視機背後的 ╥（天線輸入）端子。

提示
- 您也可將本電視機連接至其它選購的裝置。（參考 **E**）



步驟 3

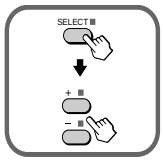
插入電源線，然後按壓電視機上的 ①（電源）鍵以接通電視機電源。



步驟 4

按壓電視機上的 **CABLE**（有線電視）鍵以選擇 " 有線電視：開 "，然後再按壓遙控器上的 **AUTO PROGRAM**（自動頻道記憶）鍵以自動預設頻道。（參考 **J**）

提示
- 若要停止自動頻道預設，請按壓 SELECT（功能選擇）鍵。

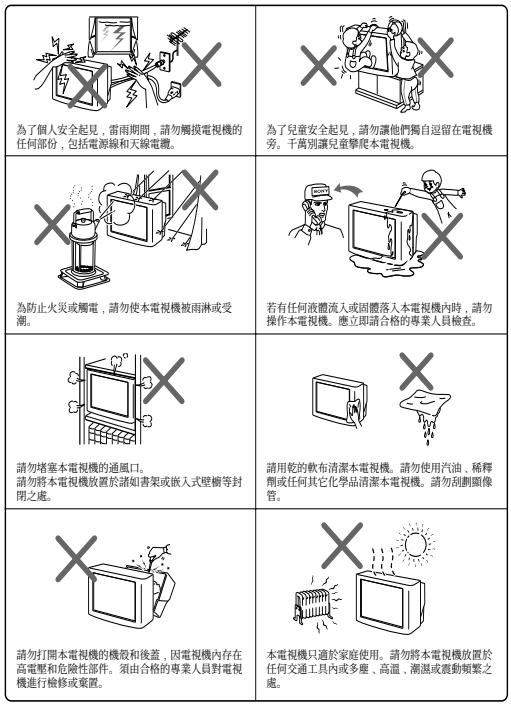


步驟 5

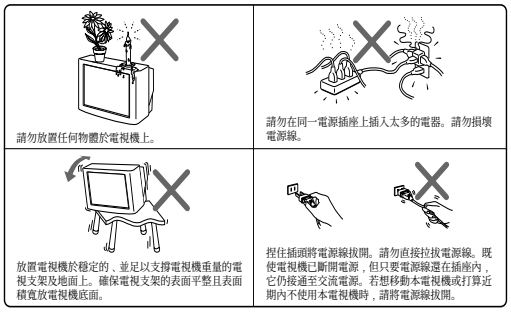
按壓遙控器上的 **SELECT**（功能選擇）鍵直到 " 語文顯示/**LANGUAGE**：中文 " 顯示於畫面上，然後按壓 **+** 或 **–** 鍵以改變畫面顯示語言。

B 警告

- 本電視機內存在危險性高電壓。
- 本電視機僅可在 110 伏特交流電壓下操作。
- 若未完成所有連接程序，請勿插入電源線；否則極少量的電流可能經天線或其它端子外泄。
- 若打算近期內不使用遙控器，請將電池取出，以避免電池泄漏而損壞遙控器。若您不小心觸及電池所泄漏的液體，應立即用水洗淨。



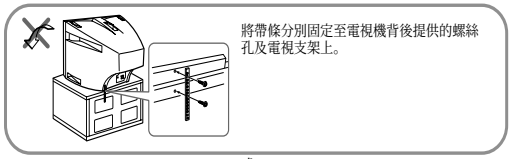
警告（續）



C 固定電視機

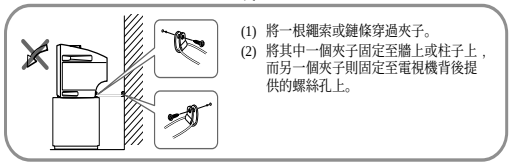
▶ 僅於 **KV-PG21 (Not used for this model)**

為防止電視機摔落，請使用所提供的螺釘、夾子和帶條以固定電視機。



將帶條分別固定至電視機背後提供的螺絲孔及電視支架上。

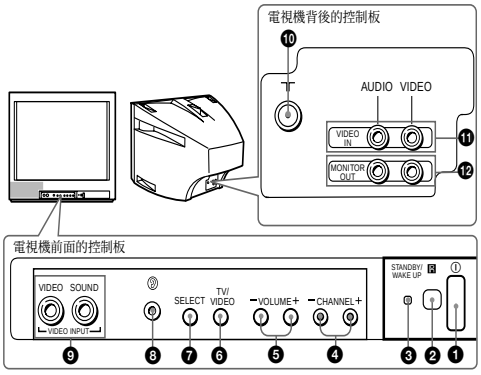
或



(1) 將一根繩索或鏈條穿過夾子。
(2) 將其中一個夾子固定至牆上或柱子上，而另一個夾子則固定至電視機背後提供的螺絲孔上。

注
- 請僅使用提供的螺釘。使用其它螺釘可能會損壞本電視機。

D 電視機前面和背後的控制板

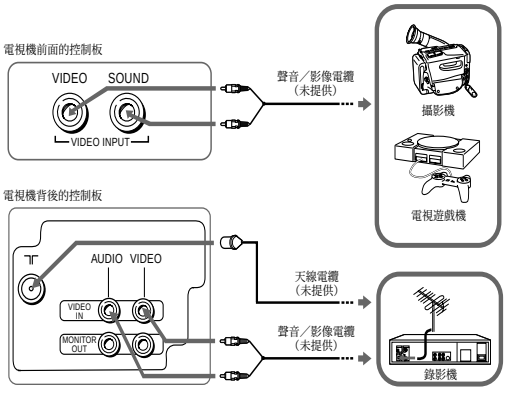


按鍵	功能
❶ ①（電源）	接通或切斷電視機電源。
❷ R	遙控傳感器。
❸ STANDBY（待機）	待機指示燈。
❸ WAKE UP（開機定時）	開機定時指示燈。
❹ CHANNEL +/–（頻道）	選擇頻道號碼。
❺ VOLUME +/–（音量）*	調整音量。
❻ TV/VIDEO（電視／影音）	選擇電視或影音輸入。
❼ SELECT（功能選擇）	選擇所要的項目。
❽	耳機插口。
❾ VIDEO INPUT（影音輸入）	影音輸入端子。
❿ ╥	天線輸入端子。
⓫ VIDEO IN（影音輸入）	影音輸入端子。
⓬ MONITOR OUT（監視器輸出）	監視器輸出端子。

* 您也可使用電視機上的 VOLUME +/–（音量）鍵以取代遙控器上的 +/– 鍵進行操作。

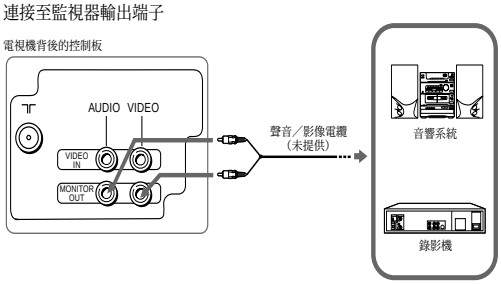
E 連接選購的裝置

連接至影音輸入端子



注
- 請不要把影像裝置同時連接至本電視機前面的 VIDEO INPUT（影音輸入）和背後的 VIDEO IN（影音輸入）。否則圖像將不能良好地在畫面上顯示。

連接至監視器輸出端子

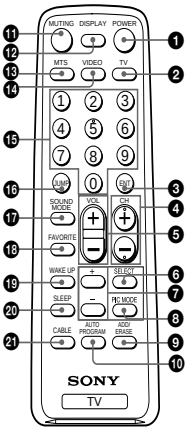


F 故障檢修

若在觀看電視時遇見任何問題，您可參考下列故障檢修指南。若問題仍然存在，請聯絡 Sony 經銷商。

癥狀	解決方法
圖像有雪花狀斑點，有噪聲	• 檢查天線電纜以及電視機，錄影機和牆上的天線連接是否正確。 • 再次手動預設頻道。（參考 **J**） • 檢查天線的裝置。請尋求 Sony 經銷商的協助。
沒有圖像，沒有聲音	• 檢查電源線，天線和錄影機之連接是否正確。 • 按壓 POWER（電源）鍵或 ⏻（電源）鍵以接通電視機電源。
圖像良好，沒有聲音	• 按壓 VOL +（音量）鍵以提高音量水平。 • 按壓 MUTING（靜音）鍵以取消消音。
圖像有點線或條紋	• 不要在電視機旁使用吹風機或其它電器。 • 檢查天線的裝置。請尋求 Sony 經銷商的協助。
圖像出現雙重影像	• 切斷信號增強器的電源或拔掉插頭以終止其操作。 • 檢查天線的裝置。請尋求 Sony 經銷商的協助。
圖像無彩色	• 選擇正確的彩色系統。（參考 **J**） • 調整顏色濃度。（參考 **K**） • 檢查天線的裝置。請尋求 Sony 經銷商的協助。
圖像出現反常彩色斑點	• 將電視機放置在遠離外部揚聲器或其它電器的地方。按壓 ⏻（電源）鍵以切斷電視機電源，約 15 分鐘後再接通電視機電源以使電視機消磁。
電視機上的 **STANDBY**（待機）指示燈每隔三秒閃爍至少一次的紅色亮光。	• 計算 STANDBY（待機）指示燈的亮光次數。按壓 ⏻（電源）鍵以切斷電視機的電源。通知您鄰近的 Sony 維修服務中心。
電視機外殼吱嘎聲。	• 室溫的變化有時會導致電視機的外殼膨脹或縮小，因而產生噪聲。這並不表示發生故障。
當您接通電視機時聽到 "嗡" 的聲音。	• 電視機自動消磁。這並不表示發生故障。

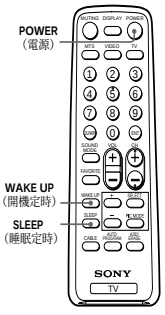
H 遙控器



按鍵	功能	頁面
❶ POWER（電源）	接通或暫時切斷電視機電源。	–
❷ TV（電視）	顯示電視節目。	–
❸ ENT	確認所輸入的號碼。	–
❹ CH +/–（頻道）	選擇頻道號碼。	–
❺ VOL +/–（音量）	調整音量。	–
❻ SELECT（功能選擇）	選擇所要的項目。	–
❼ +/–	調整所選擇的項目。	–
❽ PIC MODE（畫質模式）	選擇畫質模式。	**K**
❾ ADD/ERASE（記憶／刪除）	手動預設頻道。	**J**
❿ AUTO PROGRAM（自動頻道記憶）	自動預設頻道。	**J**
⓫ MUTING（靜音）	消除聲音。	–
⓬ DISPLAY（顯示）	顯示畫面上的信息。	–
⓭ VIDEO（影音）	選擇電視或影音輸入。	–
⓮ 0 – 9	輸入號碼。	–
⓯ JUMP	跳回到之前收看的頻道號碼。	–
定時器設定		
⓰ WAKE UP（開機定時）	設定電視自動打開。	**I**
⓴ SLEEP（睡眠定時）	設定電視自動關閉。	**I**
㉑ CABLE（有線電視）	收看有線電視節目。	–
⓲ MTS（音聲多重）	本電視機無此操作。	–
⓱ SOUND MODE（音效模式）	本電視機無此操作。	–
⓳ FAVORITE（喜愛頻道）	本電視機無此操作。	–

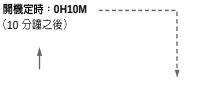
I 設置定時器

您可分別使用 WAKE UP（開機定時）鍵和 SLEEP（睡眠定時）鍵以接通或切斷本電視機電源。



設定開機定時器

1 按壓 **WAKE UP**（開機定時）鍵直到您所指定的時間顯示在畫面上。



一旦時間被設定，開機定時器立即啟動。

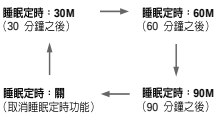
2 請選擇當您醒來時所要觀看的頻道號碼或影音輸入。

3 若您要電視機自動切斷電源，請按壓 **POWER**（電源）鍵或設定睡眠定時功能。

當電視機進入待機狀態時，電視機上的 WAKE UP（開機定時）指示燈將發出橙色亮光。

設定睡眠定時器

按壓 **SLEEP**（睡眠定時）鍵直到您所指定的時間顯示在畫面上。

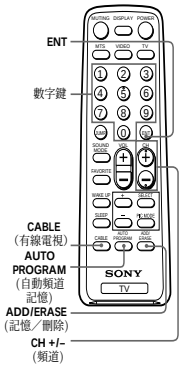


一旦時間被設定，睡眠定時器立即啟動。

注
- 您可切斷電視機主電源以取消開機和睡眠定時功能。
- 用開機定時器接通電視機電源並超過兩小時後，若您不按壓電視機或遙控器上的任何一個按鍵或控制鍵，則電視機再進入待機狀態。

J 預設頻道

您可自動預設有線電視頻道，VHF 或 UHF 的廣播頻道，或手動預設新的頻道及信號微弱的頻道。



自動預設頻道

1 按壓電視機上的 ⏻（電源）鍵以接通電視機電源。

2 按壓 **CABLE**（有線電視）以選擇 " 有線電視：開 " 。

3 按壓遙控器上的 **AUTO PROGRAM**（自動頻道記憶）鍵或同時按壓電視機上的 **SELECT**（功能選擇）鍵和 **CHANNEL +**（頻道）鍵一至兩秒以自動預設頻道。

手動預設頻道

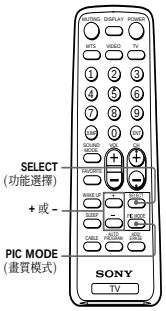
1 按壓數字鍵以選擇您所要的頻道號碼，然後按壓 **ENT** 鍵。

2 按壓 **ADD/ERASE**（記憶／刪除）鍵。
" + " 顯示於頻道號碼旁邊，這表示頻道預設已完成。

注
- 若您選擇 " 有線電視：開 " ，您將會接收到 125 個有線電視頻道。若沒有有線電視頻道，您將會接收到 VHF 的廣播頻道。
- 若您選擇 " 有線電視：關 " ，您將會接收到 68 個 VHF 或 UHF 的廣播頻道而已。

K 設置圖像

您可選擇畫質模式或調整其設定以設置圖像。



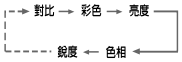
選擇畫質模式

按壓 **PIC MODE**（畫質模式）鍵以選擇所要的畫質模式。

選擇	以
" 動態 "	觀看對比度強的圖像。
" 標準 "	觀看普通的圖像。
" 柔和 "	觀看柔和的圖像。

調整圖像設定

1 按壓 **SELECT**（功能選擇）鍵直到您所要調整的設定顯示於畫面上。
每次您按壓 SELECT（功能選擇）鍵，設定項目將會改變如圖所示：



2 按壓 **+** 或 **–** 鍵以調整所選擇的項目。

3 要調整其它項目時，重復第 **1** 和第 **2** 步驟。

注
- 只有當彩色系統為 NTSC 時，您才能調整 " 色相 " 設定。
- 您也可減少 " 銳度 " 以降低圖像噪音。

預設頻道（續）

要更換彩色系統

若通過影音輸入端子接收電視節目而顏色失常時

(1) 按壓 SELECT（功能選擇）鍵直到 " 彩色系統 " 顯示於畫面上。

(2) 按壓 + 或 – 鍵以選擇適當的 " 彩色系統 " 直到顏色被改善至最理想的狀態。
自動切換 → **PAL** → **NTSC3.58** → **NTSC4.43**

要略掉不想使用的頻道號碼

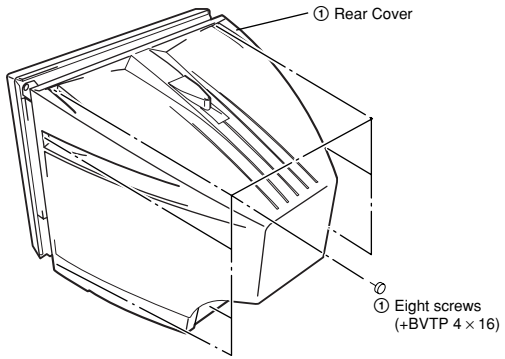
(1) 按壓 CH +/–（頻道）鍵直到不用或不要的頻道號碼顯示於畫面上。

(2) 按壓 ADD/ERASE（記憶／刪除）鍵以略掉不用或不要的頻道號碼。
" – " 顯示於頻道號碼旁邊，這表示頻道號碼已被解除。

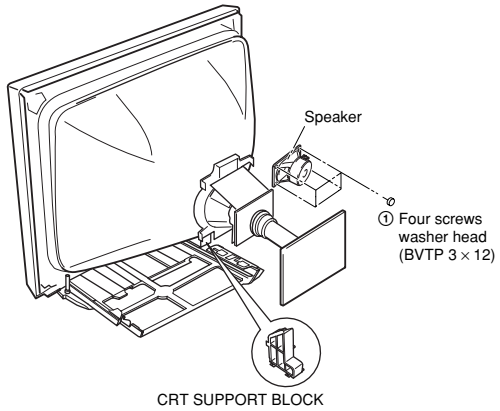
注
- 要恢復已略掉的頻道號碼時，自動或手動預設頻道。

SECTION 2
DISASSEMBLY

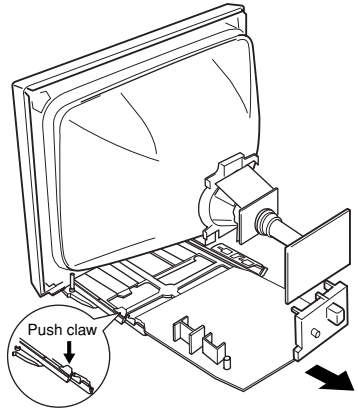
2-1. REAR COVER REMOVAL



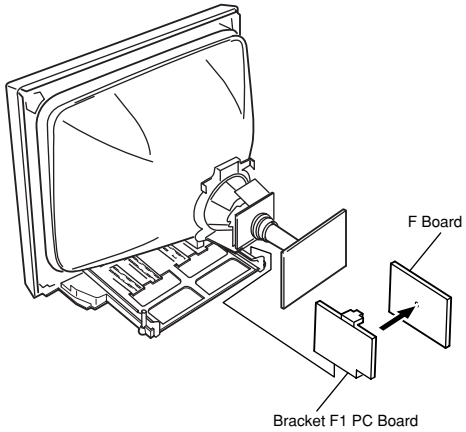
2-2. SPEAKER REMOVAL



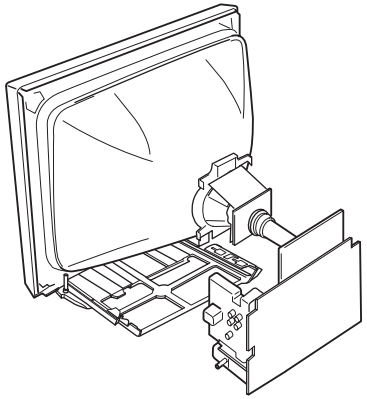
2-3. CHASSIS ASSY REMOVAL



2-4. F BOARD REMOVAL



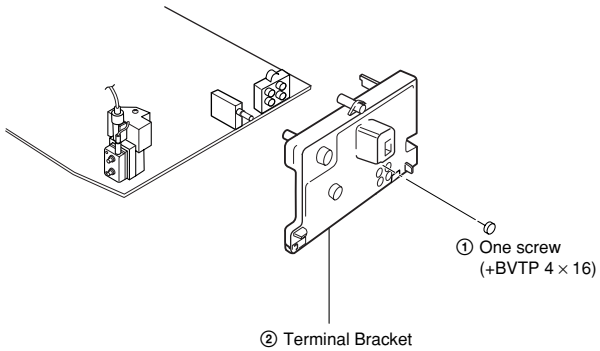
2-5. SERVICE POSITION



Caution: Do not take out CRT support block while TV set in standing position.

Note: Undress necessary wires that creates tension while placing the chassis into Service Position.

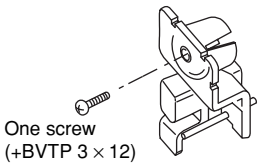
2-6. TERMINAL BRACKET REMOVAL



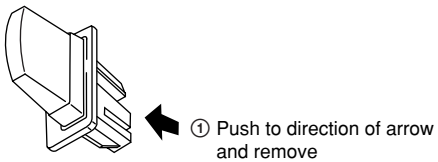
2-7. REPLACEMENT OF PARTS

For replacements of light guide,unscrew them, exchange with new parts and fix them with screws respectively.

2-7-1. Replacement of Light Guide



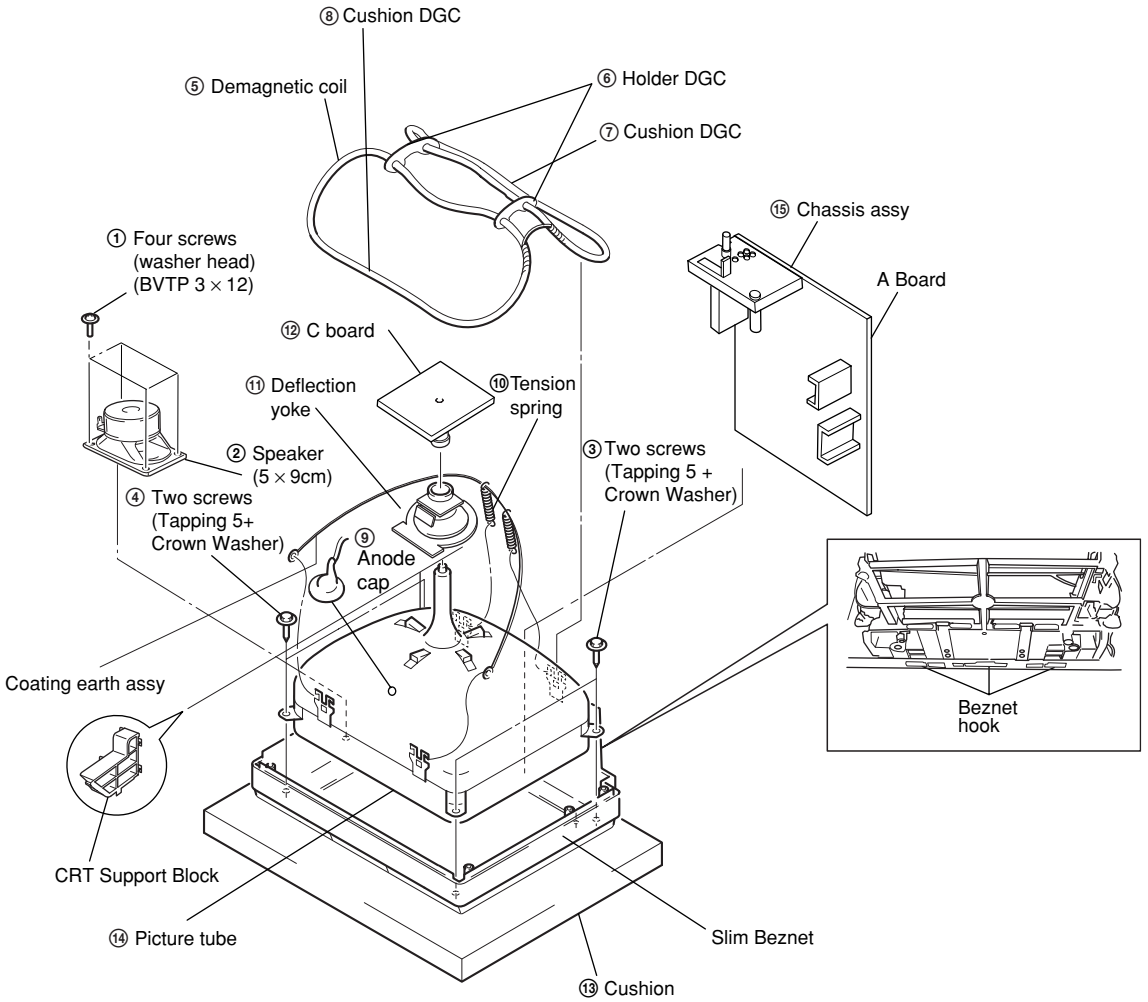
2-7-2. Replacement of Power Button



2-8. PICTURE TUBE REMOVAL

Note:

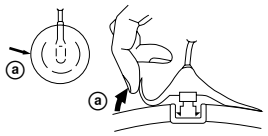
- Please make sure the TV set is not in standing position before removing necessary CRT support located on bottom right and left.



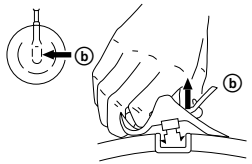
• REMOVAL OF ANODE-CAP

NOTE : After removing the anode, short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT.

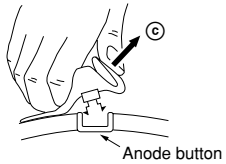
• REMOVING PROCEDURES



① **Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.**



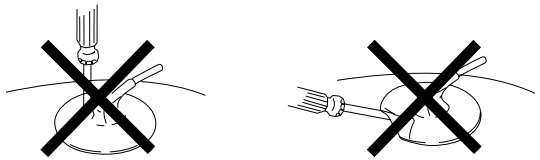
② **Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.**



③ **When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ.**

- **HOW TO HANDLE AN ANODE-CAP**

① **Do not damage the surface of anode-caps with sharp shaped objects.**
② **Do not press the rubber too hard so as not to damage the inside of anode-cap. A metal fitting called the shatter-hook terminal is built into the rubber.**
③ **Do not turn the foot of rubber over too hard. The shatter-hook terminal will stick out or damage the rubber.**



SECTION 3
SET-UP ADJUSTMENTS

The following adjustments should be made when a complete realignment is required or a new picture tube is installed.

These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switches should be set as follows unless otherwise noted:

PICTURE control ..... normal
BRIGHTNESS control ..... normal

Perform the adjustments in the following order :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Pattern Generator
2. Degausser
3. Oscilloscope

Preparation :

In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input a white signal with the pattern generator.
   Contrast } normal
   Brightness
2. Set the pattern generator raster signal to a green raster.
3. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side. (See Figures 3-1 through 3-4.)
4. Move the deflection yoke forward and adjust so that the entire screen is green. (See Figure 3-1.)
5. Switch the raster signal to blue, then to red and verify the condition.
6. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws and DY spacers.
7. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Figure 3-4.)

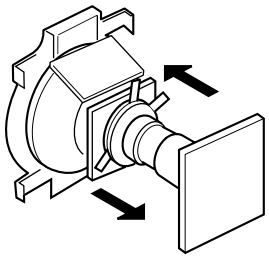


Fig. 3-1

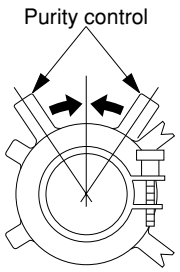


Fig. 3-2

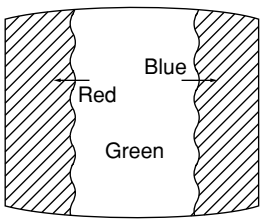


Fig. 3-3

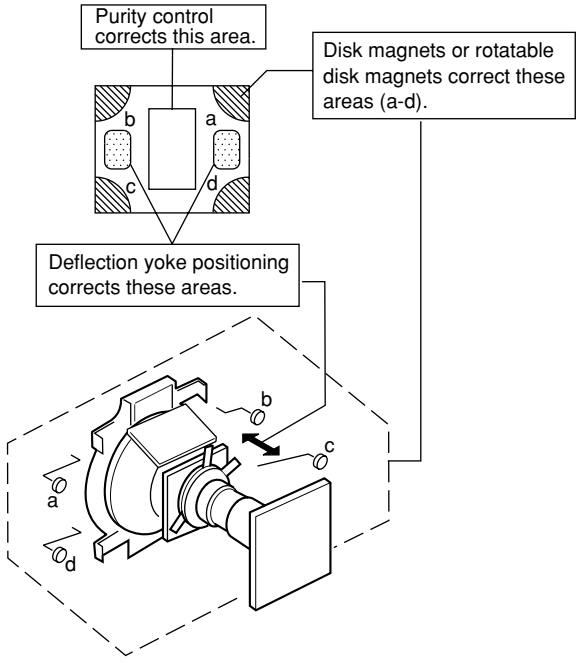


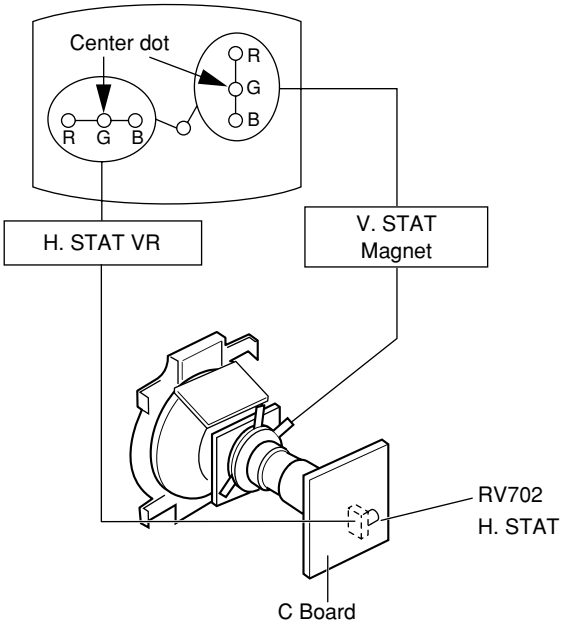
Fig. 3-4

3-2. CONVERGENCE

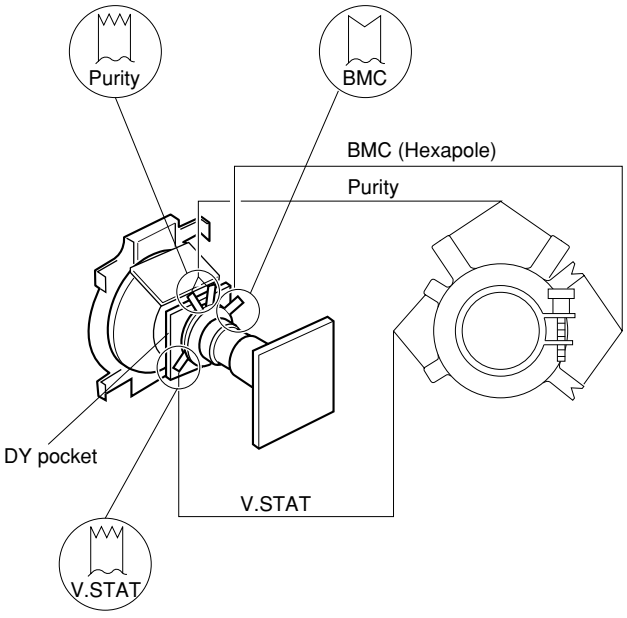
Preparation :

- Before starting this adjustment, adjust the focus, horizontal size and vertical size.
- Receive dot/hatch signal.
- Pic mode: Soft.

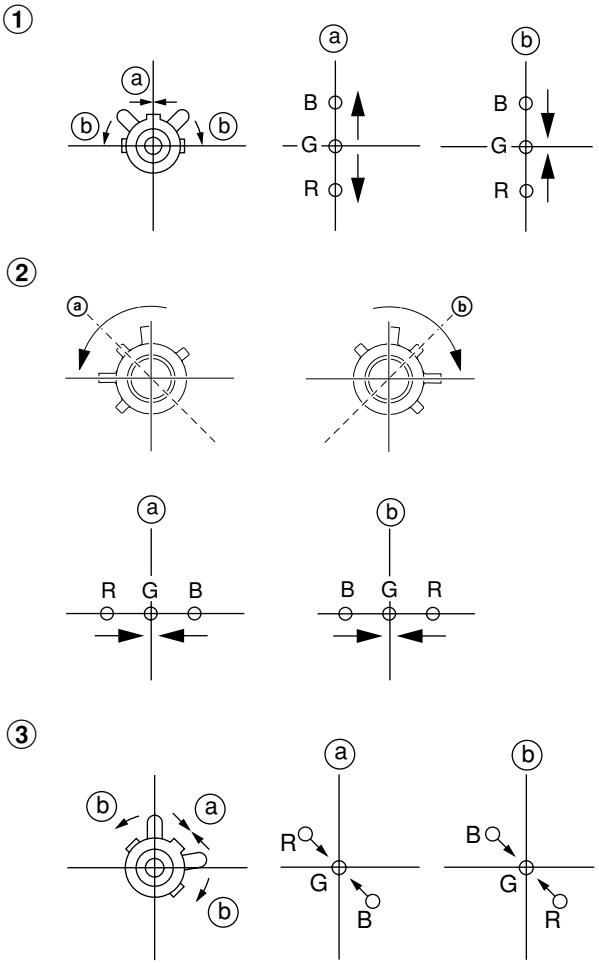
(1) Horizontal and Vertical Static Convergence



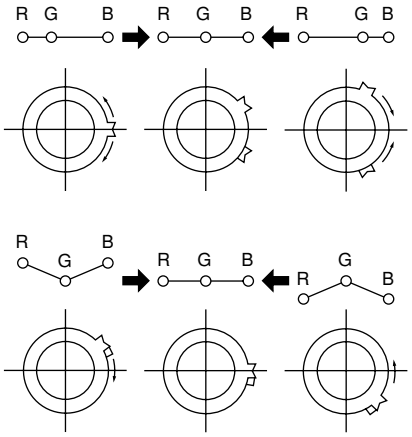
1. (Moving vertically), adjust the V.STAT magnet so that the red, green and blue dots are on top of each other at the center of the screen.
2. (Moving horizontally), adjust the H.STAT VR control so that the red, green and blue dots are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green and blue dots together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other, so be sure to perform adjustments while tracking.)



- Operation of V. Stat magnet
  If the V. Stat magnet is moved in the "a" and "b" arrows, the red, green and blue dots move as shown below.



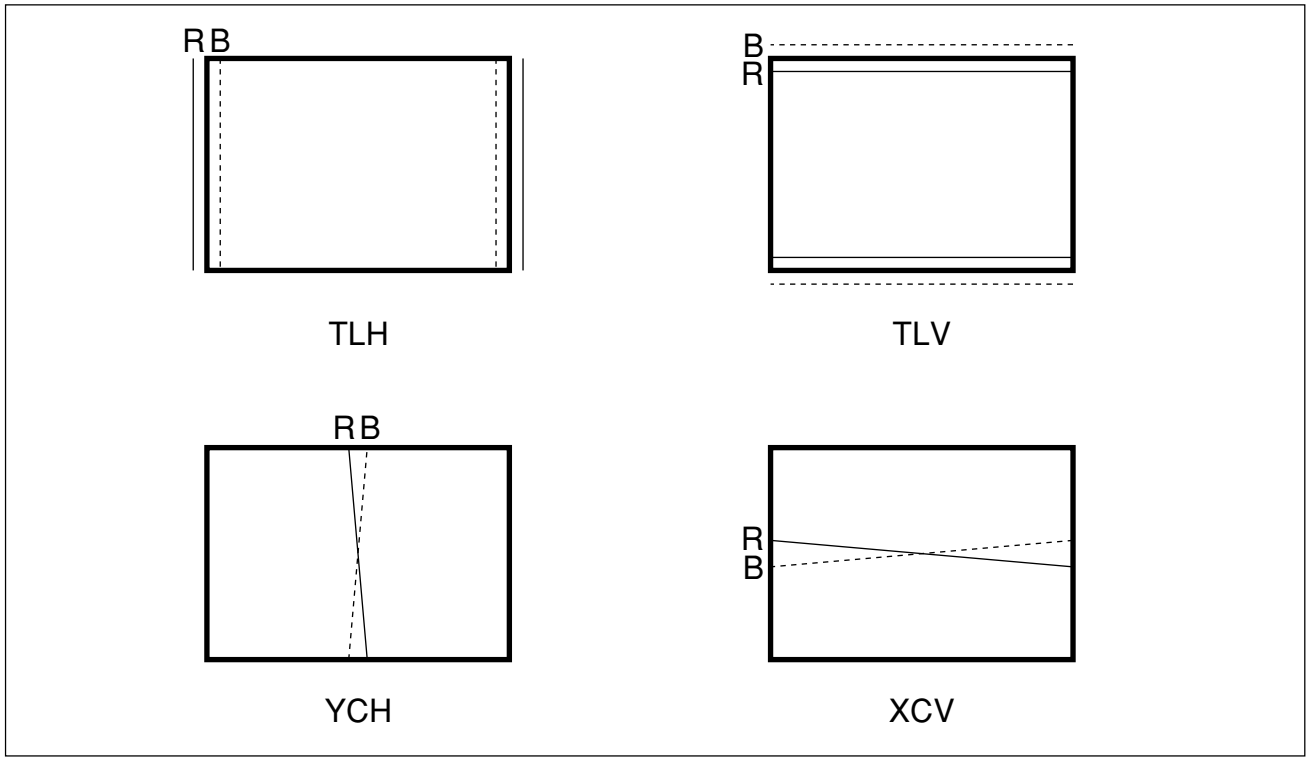
④ BMC (Hexapole) Magnet.
If the red, green and blue dots are not balanced or aligned, then use the BMC magnet to adjust in the manner described below.



(2) Dynamic Convergence Adjustment

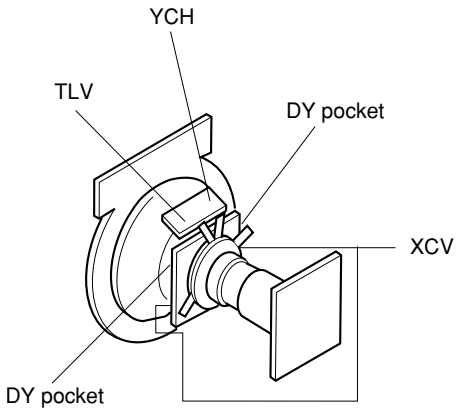
Preparation:

Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence

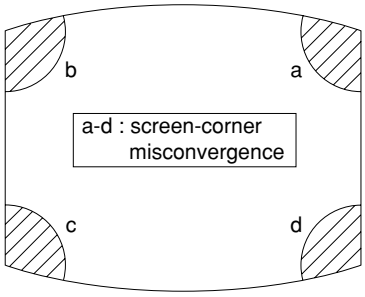


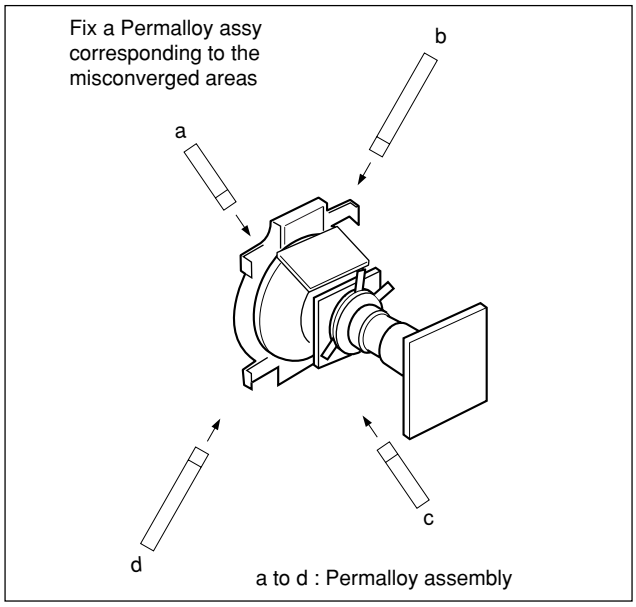
TLH	Insert	TLH	Correction Plate to DY Pocket (Left or Right)
YCH	Rotate	YCH	VOL on DY
TLV	Rotate	TLV	VOL ON DY
XCV	Rotate	XCV	Adj core on DY

ON DY:



(3) Screen-corner Convergence

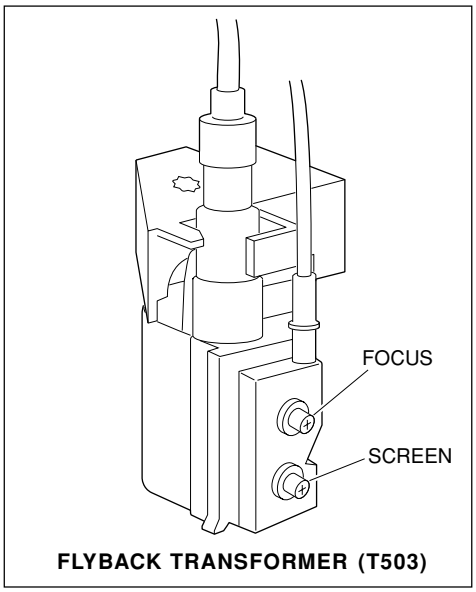




3-3. FOCUS ADJUSTMENT

FOCUS adjustment should be completed before W/B adjustment.

1. Receive digital monoscope pattern.
2. Set "Picture Mode" to "DYNAMIC".
3. Adjust focus VR so that the center of screen becomes just focus.
4. Change the receiving signal to white pattern and blue back.
5. Confirm magenta ring is not noticeable. Incase magenta is very obvious, adjust focus VR to take balance of magenta ring and focus.

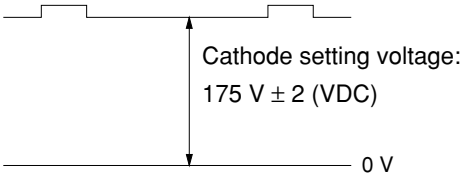


FLYBACK TRANSFORMER (T503)

3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

1. G2 (SCREEN) ADJUSTMENT

1) Set the PICTURE to normal.
2) Put to VIDEO input mode without signals.
3) Connect R, G and B of the C board cathode to the oscilloscope.
4) Adjust BRIGHTNESS to obtain the cathode voltage to the value below.
5) Adjust G2 (screen) on the FBT until picture shows the point before cut off.

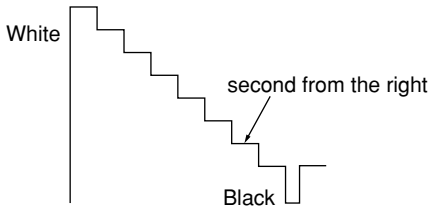


2.a) WHITE BALANCE ADJUSTMENT

1) Set to Service Mode (Refer Section 4-1: ADJUSTMENTS WITH COMMANDER).
2) Input white raster signal.
3) Set 49 (ABL) and IF (VP2) service mode to 00.
4) Set Picture to DYNAMIC.
5) Select OB (RDR) with [1] and [4], and set the level to 25 with [3] and [6] for best white balance.
6) Select OC 'GDR' and OD 'BDR' with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
7) Write into the memory by pressing [MUTING] then [0].
8) Set back 49 'ABL' and IF 'VP2' service mode to original data.

2.b) SUB BRIGHT ADJUSTMENT

1) Set to service mode.
2) Set 49(ABL) and IF (VP2) service mode to 00
3) Input a staircase signal of black to white from the pattern generator.
4) BRIGHTNESS .... 50%.
   PICTURE ..... MINIMUM
5) Select OE 'SBR' with [1] and [4], and adjust OE 'SBR' level with [3] and [6] so that the second stripe from the right is dimly lit.
6) Write into the memory by pressing [MUTING] then [0].
7) Set back 49 (ABL) and IF (VP2) service mode to original data.



SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ADJUSTMENT WITH COMMANDER

Service adjustments to this model can be performed using the supplied Remote Commander RM-915

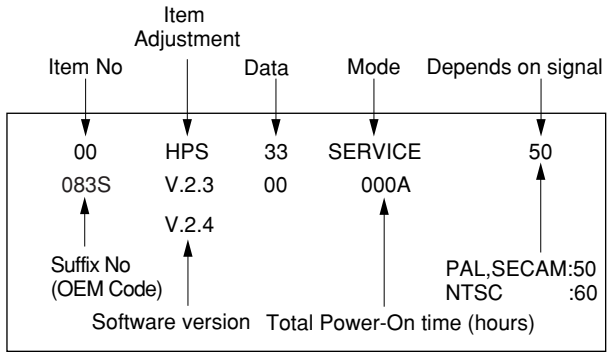
a. ENTERING SERVICE MODE

With the unit on standby

→ [DISPLAY] → [5] → [VOL (+)] → [POWER]

This operation sequence puts the unit into service mode.

The screen display is :



b. METHOD OF CANCELLATION FROM SERVICE MODE

Set the standby condition (Press [POWER] button on the commander), then press [POWER] button again, hereupon it becomes TV mode.

c. METHOD OF WRITE INTO MEMORY

1) Set to Service Mode.
2) Press [1] (UP) and [4] (DOWN), to select the adjustment.
4) Press [MUTING] button to indicate WRITE on the screen.
5) Press [0] button to write into memory.

d. MEMORY WRITE CONFIRMATION METHOD

1) After adjustment, pull out the plug from AC outlet, and then plug into AC outlet again.
2) Turn the power switch ON and set to Service Mode.
3) Call the adjusted items again to confirm adjustments were made.

[1], [4] ↓	Select the adjustment item.
[3], [6] ↓	Raise/lower the data value.
[MUTING] ↓	Writes.
[0]	Executes the writing.

e. OTHER FUNCTION VIA REMOTE COMMANDER

[7], [0]	All the data becomes the values in memory.
[8], [0]	All user control goes to the standard state.
[5], [0]	Service data initialization (Be sure not to use usually.)
[2], [0]	Copy and write all data.
[Display], [0]	Write 50Hz adjustment data to 60Hz or vice versa.

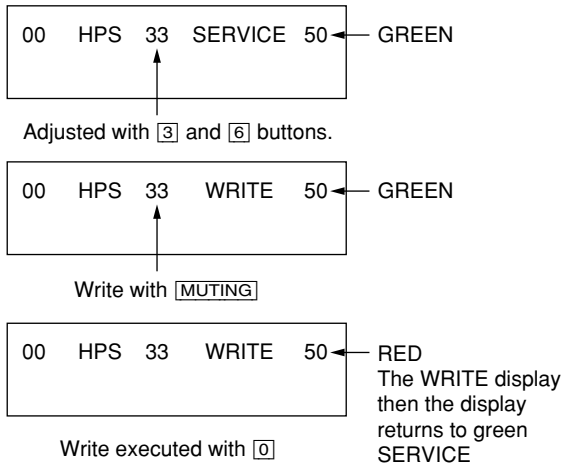
4-2. ADJUSTMENT METHOD

Item Number 00 HPS

This explanation uses H Shift as an example.

1. Select "00 HPS" with the [1] and [4] buttons.
2. Raise/lower the data with the [3] and [6] buttons.
3. Select the optimum state. (The standard is 1F for PAL reception.)
4. Write with the [MUTING] button. (The display changes to WRITE.)
5. Execute the writing with the [0] button. (The WRITE display will be changed to red color while excuting, and back to SERVICE.)

Example on screen display :-


00 HPS 33 SERVICE 50
GREEN
Adjusted with 3 and 6 buttons.
00 HPS 33 WRITE 50
GREEN
Write with MUTING
00 HPS 33 WRITE 50
RED
The WRITE display then the display returns to green SERVICE
Write executed with 0

Use the same method for all Items. Use [1] and [4] to select the adjustment item, use [3] and [6] to adjust, write with [MUTING], then execute the write with [0].

Note : 1. In [WRITE], the data for all items are written into memory together.
2. For adjustment items that have different standard data between 50Hz or 60Hz, be sure to use the respective input signal after adjustment.

Adjustment Item Table

Functionality		Init.	Range	Function	Table & Note	Device Name													
No.	Name						Common	50	60	SECAM	NTSC	PAL	TV	Video	Teletext	M system	Non- M system	Dynamic	Others
00	HPS	24	3F	H Shift	50/60Hz	TDA8843/44 (8A)		2A	2A										
01	HSZ	23	3F	H Size	50/60Hz			1F	1F										
02	PAP	21	3F	Pin Amplitude	50/60Hz			1F	1F										
03	CPN	29	3F	Corner Pin	50/60Hz			1F	1F										
04	TLT	20	3F	Tilt	50/60Hz			1F	1F										
05	VSL	20	3F	V Slope	50/60Hz			**26**	**26**										
06	VAP	1D	3F	V Amplitude	50/60Hz			0F	0F										
07	SCO	20	3F	S Correction	50/60Hz			0F	0F										
08	VPS	20	3F	V Shift	50/60Hz			**1F**	**1F**										
09	VZM	19	3F	Vertical Zoom			**19**												
0A	VSC	20	3F	Vertical Scroll	50/60Hz			1F	1F										
0B	RDR	25	3F	R Drive	Dynamic/Others													**1F**	**24**
0C	GDR	25	3F	G Drive	Dynamic/Others													25	25
0D	BDR	25	3F	B Drive	Dynamic/Others													25	20
0E	SBR	4B	7F	Sub Brightness			58												
0F	PMX	27	3F	Picture Maximum Data	TV/Video/Teletext								20	20	20				
10	PMI	05	3F	Picture Minimum Data			**04**												
11	SHU	05	0F	Sub Hue	TV/Video								07	09					
12	SSH	01	03	Sub Sharpness	TV/Video								**01**	**03**					
13	SC1	1F	3F	Sub Color Lower	50/60Hz			20	1C										
14	SC2	0B	3F	Sub Color Higher	50/60Hz			**14**	**16**										
15	FO	00	03	01 Time Constant	TV/Video/Teletext								**00**	**00**	**00**				
16	AGT	30	3F	AGC Take Over	TV/Video/Teletext								00	00	00				
17	VSW	00	01	Video Mute Switch	TV/Video/Teletext								**00**	**01**	**00**				
18	FOR	00	03	Forced Field Frequency			**03**												
19	DL	00	01	De-interlace			**00**												
1A	POC	00	01	Fixed 01 Synchro. Mode			**00**												
1B	COR	01	01	Noise Coring	TV/Video/Teletext								**01**	**00**	**00**				
1C	RBL	00	01	RGB Blanking	TV/Video/Teletext								**00**	**00**	**00**				
1D	YDL	08	0F	Y-Delay	PAL/NTSC/SECAM					0A	0A	05							
1E	VP1	00	FF	Extra Bits (see below)			**20**												
1F	VP2	01	FF	Extra Bits (see below)			**01**												
20	VP3	08	FF	Extra Bits (see below)			**0B**												

Adjustment Item Table

Functionality		Init.	Range	Function	Table & Note	Device Name												
No.	Name						Common	50	60	SECAM	NTSC	PAL	TV	Video	Teletext	M system	Non- M system	Dynamic	Others
21	ING	00	0F	Input Gain	M System/non-M/Video	TDA7438 (88)								00		00	00		
22	VOM	01	3F	Volume Output Gain	M System only		00												
23	BCS	01	03	Bass Center Shift			**00**												
24	TCS	01	03	Treble Center Shift			**00**												
25	BKP	00	3F	Picture Data at Blanking OFF		Other Control	**00**												
26	ODL	10	FF	Power ON Delay			**12**												
27	OSH	0A	3F	OSD H Position			0A												
28	TSY	00	03	TV System at Auto Preset	00:B/G,01:I,02:D/K,03:M		**00**												
29	DKS	01	01	D/K Stereo enable/disable			**01**												
2A	MUT	00	01	Muting on/off at No Sync			**01**												
2B	ABL	00	01	Bright ABL Switch			**01**												
2C	SCM	00	01	SECAM Trap active/inactive			**01**												
2D	SLS	00	01	Activate SL. OR. IFI Sync			**01**												
2E	SSV	02	07	Space Sound Volume Step Up			**02**												
2F	VPW	28	7F	Timer of Video Processor start up wait			**35**												
30	SCA	01	01	Shipping Condition of Cable on/off			**01**												
31	SCH	01	7F	Shipping Condition of Channel Number			**07**												
32	OP1	2F	FF	Optional Flags 0 (see specified pages)			**21**												
33	OP2	0F	FF	Optional Flags 1 (see specified pages)			8D												
34	OP3	00	FF	Optional Flags 2 (see specified pages)			20												

NOTE : Bold item are fixed data.

- Standard data listed on the Adjustment Item Table are reference values, therefore it may be different for each model and for each mode.
- Note for Different Data Those are the standard data values written on the microprocessor. Therefore, the data values of the modes and stored respectively in the memory.
  In case of a device replacement, adjustment by rewriting the data value is necessary for some items.

ITEM INFORMATION

No. 1E VP1

Item	BCO	OSO	SBL	HBL	FCO	FFI
KV-PG14N70	0	0	0	0	0	0

BCO	Switch-on behaviour 1 = Switch-on of picture via unternal delay 0 = Without delay	00(4)
OSO	1 = Switch-off in vertical overscan 0 = Switch-off undefind	18(7)
SBL	Service blanking 1 = on 0 = off	0B(7)
HBL	RGB Blanking Mode 1 = wide blanking, 0 = normal blanking	02(7)
FCO	Forced Color-on 1 = no colour killer 0 = normal colour killer function	1B(0)
FFI	Fast filler IF-PLL 1 = increased time constant 0 = normal time constant	1A(1)

No. 1F VP2

Item	MAT	DS	DSA	EBS	BLS	BKS
KV-PG14N70	0	0	0	0	0	1

MAT	PAL-SECAM-/NTSC Matrix 1 = PAL matrix, 0 = adapted to standard	0E(7)
DS	Dynamic skin control on/off 1 = on 0 = off	1A(3)
DSA	Dynamic skin control angle 1 = correction angle 117 degrees 0 = correction angle 123 degrees	1A(2)
EBS	Extended Blue Stretch 1 = on 0 = off	1A(0)
BLS	Blue stretch 1 = on 0 = off	18(4)
BKS	Black stretch 1 = on 0 = off	18(3)

No. 20 VP3

Item	BB	AKB	BPS	CB	ACL	CL2	CL1	CLO
KV-PG14N70	0	0	0	0	1	0	1	1

BB	Blue back when no video signal is identified 1 = on 0 = off	18(0)
AKB	Black current stabilisation 1 = not active 0 = active	02(6)
BPS	Bypass of chroma base-band delay line 1 = bypassed 0 = active	19(6)
CB	Chroma bandpass centre frequency 1 = 1.1xFsc 0 = Fsc	18(5)
ACL	Automatic colour limiting 1 = active 0 = not active	19(5)

CL2	CL1	CL0	Cathode Drive amplitude
0	0	0	57V
0	0	1	63V
0	1	0	70V
0	1	1	77V
1	0	0	84V
1	0	1	91V
1	1	0	99V
1	1	1	107V

No. 32 OP1

Item	HA ME VOL	AV INPUT		COMB	B/G	I	D/K	M
KV-PG14N70	0	0	1	0	0	0	0	1

HA ME Vol — Tone controller Volume curve setting. 1 = for HA(ME), 0 = for HA(GE)

AV Input — 00 = no AV Input model 01 = 1 AV Input model
10 = 2 AV Input model 11 = Not available

COMB (for NTSC model) — 1 = Enable external comb filter, 0 = Disable external comb filter

Other optional function will be enabled if the corresponding bit is set to 1.

No. 33 OP2

Item	NO NICAM	US ST	HDEV	IV-CURVE	XTAL SEL		SECAM	2nd LANG.
KV-PG14N70	1	0	0	0	1	1	0	1

No NICAM (Multi Model Only) — 1 = NICAM search is disable in any TV system, 0 = NICAM search operates

US ST — (Reserved for NTSC model)

HDEV (Multi Model Only)

1 V-Curve (Multi Model Only) — 1 = using common volume curve for every mode and every TV system
0 = another volume curve available for video mode and M system

XTAL SEL — 00 = only 4.43 XTAL 01 = only 3.58 XTAL
10 = not used 11 = both 4.43 and 3.58 XTAL

Other optional function will be enabled if the corresponding bit is set to 1.

No. 34 OPB3

Item	PIC. ROT	AUTO TV SYS.	NO BAL.	SPC SOUND	KOREAN ST	VM	H. K. BIL	THAI BIL
KV-PG14N70	0	0	0	0	0	0	0	0

No Bal. 1 = no balance in analog select items, 0 = balance included
(for AV stereo model)
SPC SOUND 1 = Space Sound available, 0 = not available
Korean ST (Reserved for NTSC model)
H.K. Bil 1 = NICAM bilingual available (No NICAM stereo), 0 = not available
(Multi Model Only)
Thai Bil. (Multi Model Only)
Other optional function will be enabled if the corresponding bit is set to 1.

OPERATION GUIDE

SERVICE MODE

How to set up new NVM (or initialize already written one)
(1) AC ON
(2) Enter Service Mode - describing below how to enter
(3) Push the commander button “5” and “0” sequentially (only set initial data into RAM, but not write them into NVM yet)
(4) Push the commander button “2” and “0” sequentially (copy the data into all NVM area - all wide modes and 50/60Hz respectively)
(5) Push the commander button “8” and “0” sequentially (initialize user data, select program 1 and exit Service Mode)
(6) Select TV system and execute Auto Preset

How to enter Service Mode
- At power ON, push the commander button “test” and “TV ON” sequentially
- At stand-by, push the commander button “display”, “5”, “vol +” and “power” sequentially

How to exit Service Mode
- Push the commander button “other ON” or power (AC) OFF

How to increment/decrement items and data
- Items : push the commander button “1” / “4”
- Data : push the commander button “3” / “6” (not write into NVM)

Other operations
- Write data into NVM - push the commander button “mute” and “0” sequentially
- Read data from NVM - push the commander button “7” and “0” sequentially
- Copy 50Hz data into 60Hz area - push the commander button “display” and “0” sequentially

SELF DIAGNOSIS MODE

How to enter Self Diagnosis Mode
- At stand-by, push the commander button “display”, “5”, “vol-” and “power” sequentially

How to exit Self Diagnosis Mode
- Push the commander button “other ON” or power (AC) OFF

Other operations
- Clear data and Write into NVM - push the commander button “8” and “0” sequentially

HOTEL TV MODE

How to enter Hotel TV Mode ON stage
- At stand-by, push the commander button “display”, “MUTE”, “vol +” and “power” sequentially
- The Hotel TV setup display, where the maximum level of the volume can be applied (=35 or above)
- Write data into NVM - push the commander button “mute” and “0” sequentially

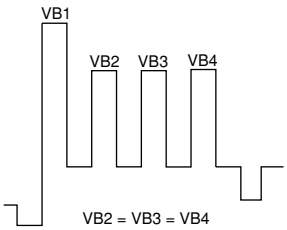
How to enter Hotel TV Mode OFF stage
- At stand-by, push the commander button “display”, “MUTE”, “vol -” and “power” sequentially
- Write data into NVM - push the commander button “mute” and “0” sequentially

Modification Note
The item including the new addition is yellow.

4-3. PICTURE QUALITY ADJUSTMENT

SUB COLOR ADJUSTMENT

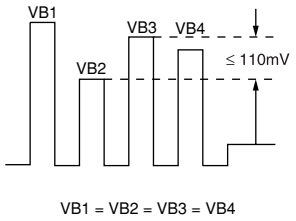
1. Select Video.
2. Input a PAL color-bar.
3. Set to the following condition:
   PICTURE 100%, BRIGHTNESS 50%, COLOR 50%
4. Connect an oscilloscope to pin ① (B OUT) of CN300, A board.
5. Set to Service Mode and select 13 'SC1' with [1] and [4] of the commander then adjust to VB2=VB3=VB4 with [3] and [6].
6. Press [MUTING] → [0] of the commander to write the data.
7. Adjust 13 'SC1' as step 2 to 5 when receiving NTSC color-bar.



VB2 = VB3 = VB4 (Difference is within 70mV)

SUB HUE ADJUSTMENT

1. Select Video.
2. Input a NTSC 3.58, color-bar into Video/TV mode.
3. Set the following condition:
   PICTURE 100%, BRIGHTNESS 50%, COLOR 50%
4. Connect an oscilloscope to pin ① (B OUT) of CN300, A board.
5. Select 11"SHU" with [1] and [4] of the commander by setting to Service Mode and adjust to VB1=VB2=VB3=VB4 with [3] and [6] .



   The highest level of VB1,VB2,VB3,VB4 must be aligned at the same line. Ideal difference level between VB2 and VB3 should be within ± 110mV.
6. Press [MUTING] → [0] of the commander to write the data.
7. Select TV channel with NTSC 3.58 and repeat 3 to 5.
8. Press [MUTING] → [0] of the commander to write the data.
9. Single system model with NTSC 4.43, select TV channel with NTSC 4.43 and repeat 3 to 5.

4-4. DEFLECTION ADJUSTMENT

NORMAL MODE (50Hz)

1. Set to Service mode.
2. Input PAL color bar.
3. Using the [1] and [4] button, select category GEO (Service Mode).
4. Raise/lower the data using the [3] and [6] buttons.
   Select and adjust the following items to obtain optimum image.

Service Item

GEO :	00	HPS	H POSITION
	01	HSZ	H SIZE
	02	PAP	PIN AMPLITUDE
	03	CPN	CORNER PIN
	04	TLT	TILT
	05	VSL	V SLOPE
	06	VAP	VERTICAL AMPLITUDE
	07	SCO	S CORRECTION
	08	VPS	V SHIFT

NORMAL MODE (60Hz)

5. Input 525/60Hz signal.
6. Using the [1] and [4] buttons select category GEO (Service Mode).
7. Select and adjust the following items to obtain obtimum image.
   Raise/lower the data with the [3] and [6] buttons.

Service Item

GEO :	00	HPS	H POSITION
	01	HSZ	H SIZE
	02	PAP	PIN AMPLITUDE
	03	CPN	CORNER PIN
	04	TLT	TILT
	05	VSL	V SLOPE
	06	VAP	VERTICAL AMPLITUDE
	07	SCO	S CORRECTION
	08	VPS	V SHIFT

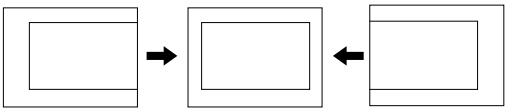
4-5. A BOARD ADJUSTMENT AFTER IC003 (MEMORY) REPLACEMENT

1. Enter to Service Mode.
2. Press commander buttons [5] and [0] (Data Initialize), and [2] and [0] (Data Copy) to initialize the data.
3. Call each item number and check if the respective screen shows the normal picture.
   In cases where items are not well adjusted, rectify the fine adjustment.
   Write the data per each item number ([MUTING] +[0]).
4. Select item numbers 4E 'OP0', 4F 'OP1', 50 'OP2' and respectively set the bit per model with command buttons [3] and [6] .
5. Press commander buttons [8] and [0] (Test Normal) to return to the data that was set on the shipment from the factory. (This will also cancel Service Mode.)

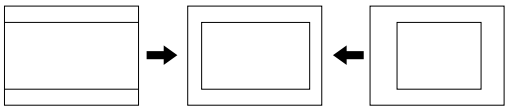
4-6. PICTURE DISTORTION ADJUSTMENT

Item Number 00 – 08

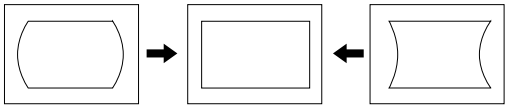
00 HPS (H POSITION)



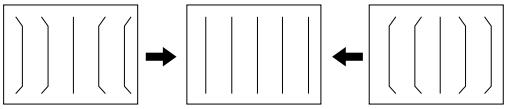
01 HSZ (H SIZE)



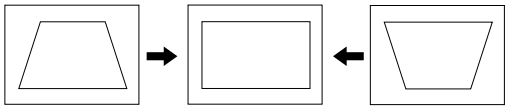
02 PAP (PIN AMPLITUDE)



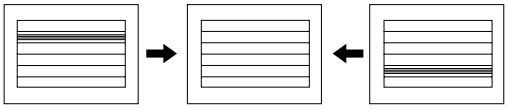
03 CPN (CORNER PIN)



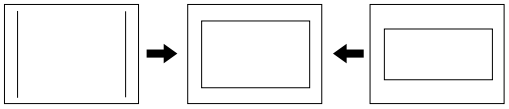
04 TLT (TILT)



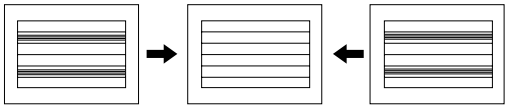
05 VSL (V SLOPE)



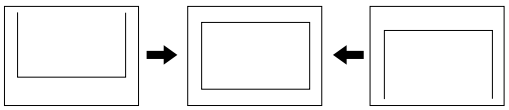
06 VAP (VERTICAL AMPLITUDE)



07 SCO (S CORRECTION)

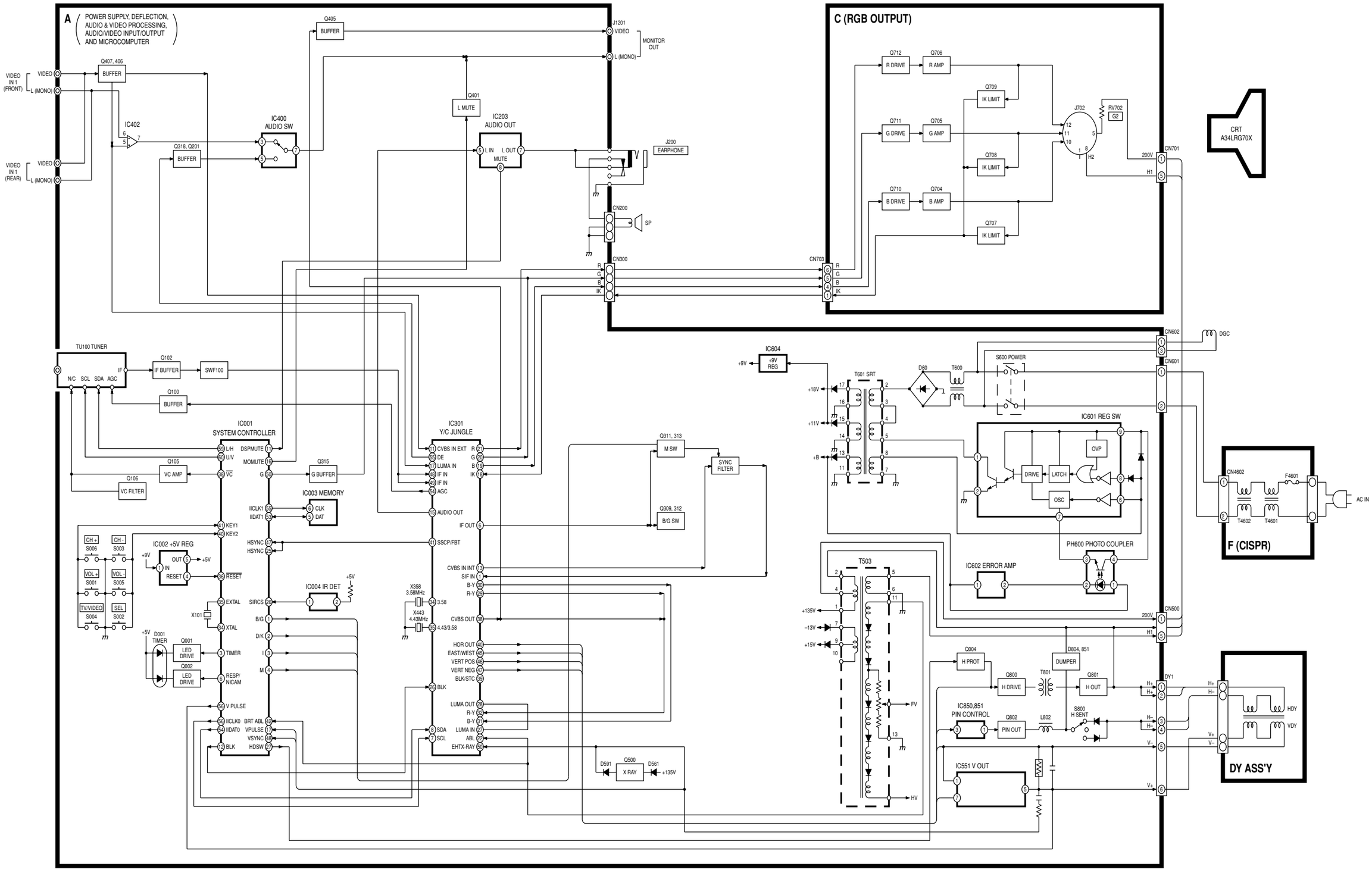


08 VPS (V SHIFT)

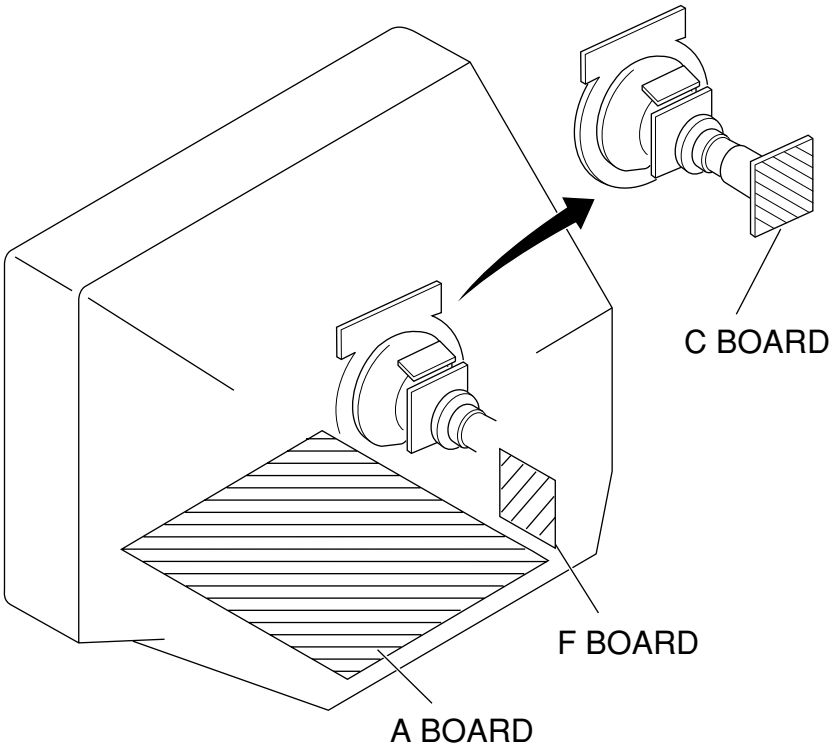


SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAM



5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAM

Note:

- All capacitors are in µF unless otherwise noted.
- All electrolytic capacitors are rated at 50V unless otherwise noted.
- All resistors are in ohms.
  kΩ = 1000Ω, MΩ = 1000kΩ
- Indication of resistance which does not have rating electrical power is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4W (CHIP: 1/10W)

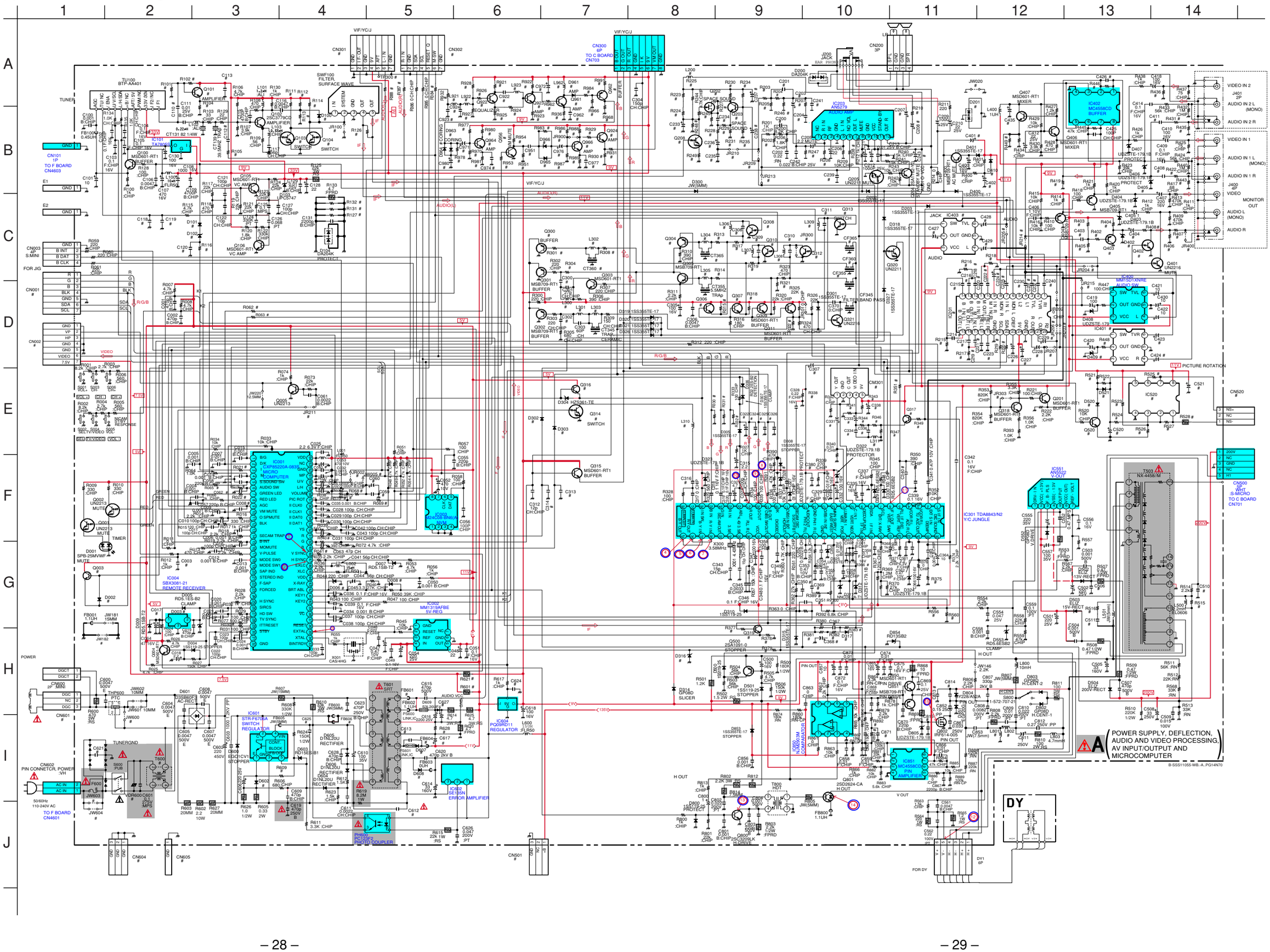
- : nonflammable resistor.
- △ : internal component.
- : panel designation or adjustment for rrepair.
- All variable and adjustable resistors have characteristic curve B unless otherwise noted.
- **Redings are taken with a color-bar signal input.**
  no mark : Common
  ( ) : PAL
  [ ] : NTSC 3.58
- **Readings are taken with a 10 MΩ digital multimeter.**
- **Voltage are dc with respect to ground unless otherwise noted.**
- **Voltage variations may be noted due to normal production tolerances.**
- **All voltage are in Volt.**
- **✻ : Cannot be measured.**
- **Circled numbers are waveform references.**
- **: B +bus.**
- **: B –bus.**
- **: signal path.**

Reference information

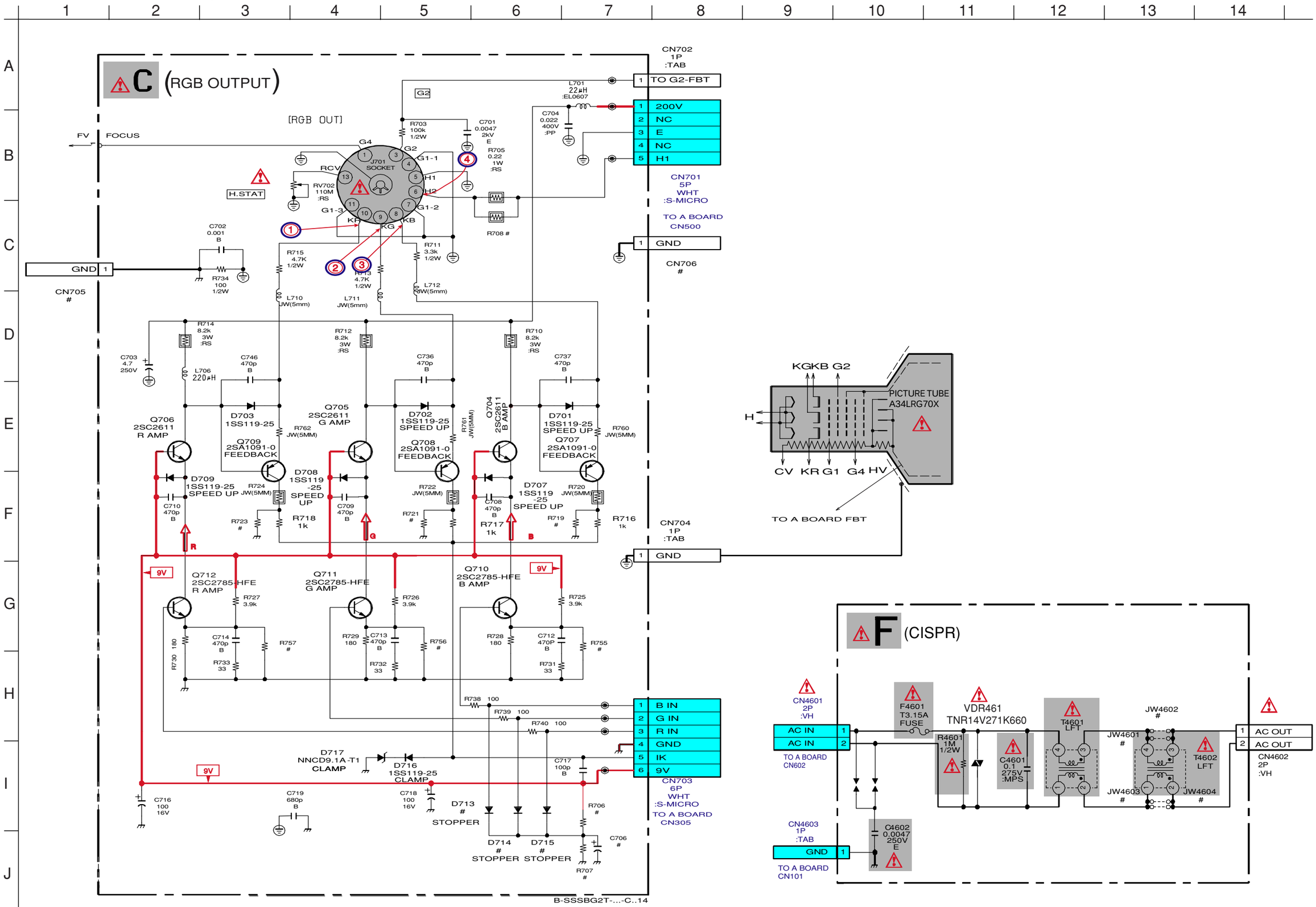
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ✻	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The component identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

(1) A Board Schematic Diagram



(2) C and F Boards Schematic Diagrams



5-4. VOLTAGE MEASUREMENT

A(1/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]
IC001	1	4.7
	2	0
	3	0
	4	0
	5	5.0
	6	(0) [5.0]
	7	0
	8	(0) [0.2]
	9	5.0
	10	5.0
	11	0
	12	0
	13	0
	14	0
	15	5.0
	16	0
	17	0
	18	0
	19	0.6
	20	0
	21	5.0
	22	0
	23	(0) [5.0]
	24	(5.0) [0]
	25	(0) [0.3]
	26	3.8
	27	0
	28	0.5
	29	5.0
	30	5.0
	31	5.0
	32	0
	33	5.0
	34	2.5
	35	2.2
	36	5.0
	37	0
	38	(2.8) [4.9]
	39	0.5
	40	5.0
	41	5.0
	42	0.1
	43	0.7
	44	5.0
	45	(2.8) [5.0]
	46	(2.8) [5.0]
	47	0.4
	48	0
	49	0
	50	0
	51	0
	52	0
	53	5.0
	54	4.8
	55	5.0
	56	4.8
	57	5.0
	58	0
	59	8.8
	60	(0.2) [8.8]
	61	0
	62	0
	63	5.0
	64	5.0
IC002	1	0
	2	5.0
	3	4.9
	4	13.4
	5	5.0
	6	0
	7	0
	8	0.3
IC003	1	0
	2	0
	3	0
	4	0
	5	4.0
	6	4.0
	7	0
	8	4.0
IC004	1	4.9
	2	3.8
	3	0
IC101	I	8.9
	G	0
	O	0.4
IC201	1	0.5
	2	0.5
	3	0.4
	4	0.4
	5	0.4
	6	0.4
	7	0.4
	8	0.4
	9	0.4
	10	0.4
	11	0.4
	12	0.4
	13	0.4
	14	0.4
	15	0.4
	16	0.4
	17	0.4
	18	0.4
	19	0.4
	20	0
	21	0.4
	22	0.4
	23	0.4
	24	0.4
	25	0
	26	0.4
	27	0.4
	28	0.3
IC203	1	0.4
	2	0.4
	3	15.4
	4	0
	5	0
	6	0.4
	7	7.2
	8	0.5
	9	0
	10	16.5
	11	8.2
	12	0.3
IC301	1	0.7
	2	3.7
	3	0.4
	4	0.4
	5	(2.6) [3.6]
	6	(2.9) [4.6]
	7	4.8
	8	4.8
	9	6.7
	10	0
	11	3.4
	12	8.1
	13	(3.8) [4.4]
	14	0
	15	2.9
	16	0.5
	17	(3.4) [3.9]
	18	6.2
	19	2.6
	20	2.6
	21	2.7
	22	(2.4) [2.1]
	23	3.5
	24	3.5
	25	3.5
	26	0.1
	27	2.7
	28	2.7
	29	2.4
	30	2.4
	31	2.4
	32	2.4
	33	0.3
	34	2.5
	35	2.5
	36	4.7
	37	8.1
	38	2.5
	39	4.9
	40	1.1
	41	(*) [0.6]
	42	3.1
	43	(4.0) [4.3]
	44	0
	45	(4.2) [4.0]
	46	1.4
	47	1.4
	48	4.7
	49	4.7
	50	1.5
	51	3.8
	52	3.8
	53	(4.6) [1.1]
	54	(4.2) [8.0]
	55	2.9
	56	3.1
IC400	1	(0) [4.9]
	2	4.4
	3	8.9
	4	5.2
	5	0
	6	5.2
IC402	1	1.4
	2	1.3
	3	2.5
	4	0
	5	2.5
	6	2.5
	7	5.5
	8	8.9
IC551	1	0.6
	2	12.9
	3	12.4
	4	(13) [-12.9]
	5	0.3
	6	12.7
	7	0.6

A(2/2) BOARD VOLTAGE LIST

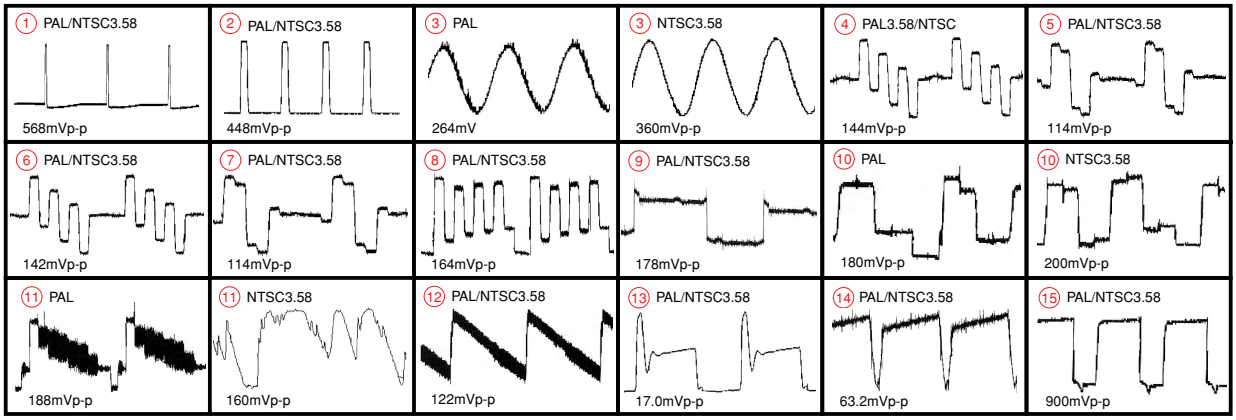
Ref	Pin No	Voltage[v]
IC601	1	0.9
	2	0.2
	3	(45.5) [0.4]
	4	(8.7) [0.4]
	5	(0.2) [0]
IC602	1	0
	2	121.9
	3	134
IC604	I	13.4
	G	8.9
	O	0
IC850	1	(*) [2.2]
	2	0.8
	3	1.0
	4	0
	5	2.7
	6	(*) [2.2]
	7	5.9
	8	8.9
IC851	1	(2.2) [2.7]
	2	3.2
	3	3.2
	4	0
	5	(2.5) [2.8]
	6	(2.5) [2.8]
	7	(3.9) [3.7]
	8	8.9
PH600	1	133.4
	2	(121.7) [*]
	3	(134.4) [8.7]
	4	(134.4) [1.4]
Q002	B	(5.0) [0]
	C	(0) [4.9]
	E	0
Q003	B	(0.4) [0.1]
	C	5.0
	E	0
Q004	B	(0.2) [0.1]
	C	5.0
	E	(0.1) [0.2]
Q100	B	3.6 [7.4]
	C	8.8
	E	(4.2) [8]
Q103	B	0
	C	3.2
	E	0
Q104	B	0
	C	0
	E	(0.4) [3.2]
Q105	B	(0.4) [0]
	C	(9.3) [0]
	E	(0) [0.6]
Q106	B	0
	C	3.9
	E	0.6
Q201	B	(0.4) [4.7]
	C	8.9
	E	5.3
Q204	B	16.5
	C	16.5
	E	15.8
Q205	B	(4.8) [0.2]
	C	(0) [0.2]
	E	(0) [4.8]
Q300	B	(3.0) [3.6]
	C	0
	E	8.9
Q301	B	(3.0) [3.6]
	C	0
	E	(2.3) [3.9]
Q302	B	(3.0) [3.9]
	C	0
	E	8.9
Q303	B	(2.3) [3.7]
	C	(7.7) [6.1]
	E	(2.9) [4.2]
Q304	B	(2.9) [4.2]
	C	(2.3) [3.7]
	E	8.9
Q305	B	(3.0) [4.0]
	C	(2.3) [3.5]
	E	(2.3) [3.6]
Q306	B	8.9
	C	8.9
	E	(2.9) [4.6]
Q307	B	8.9
	C	(3.2) [9.0]
	E	(2.9) [4.7]
Q308	B	0
	C	(0.3) [8.8]
	E	(0.2) [0]
Q309	B	(1.7) [3.8]
	C	(4.5) [9.0]
	E	(2.9) [4.7]
Q310	B	0
	C	8.9
	E	0
Q311	B	8.9
	C	8.9
	E	(2.9) [4.7]
Q312	B	0
	C	0
	E	3.9
Q313	B	0
	C	8.9
	E	0
Q314	B	0
	C	0.6
	E	0
Q315	B	2.6
	C	8.9
	E	0
Q318	B	2.1
	C	(0.4) [5.4]
	E	2.7
Q320	B	0
	C	3.3
	E	0
Q400	B	13.3
	C	-0.3
	E	13.4
Q401	B	0
	C	0
	E	(-0.5) [-0.1]
Q402	B	0
	C	0.4
	E	(-0.5) [-0.2]
Q403	B	0.4
	C	0
	E	(0.4) [0.6]
Q404	B	5.2
	C	0
	E	4.5
Q405	B	3.2
	C	0
	E	2.5
Q406	B	1.8
	C	4.2
	E	2.5
Q407	B	(0.5) [3.5]
	C	8.9
	E	4.2
Q801	B	0.2
	C	0
	E	0
Q802	B	5.0
	C	(8) [9]
	E	0
Q850	B	5.8
	C	8.9
	E	5.9
Q851	B	(5.6) [6.0]
	C	0
	E	5.9

C BOARD VOLTAGE LIST

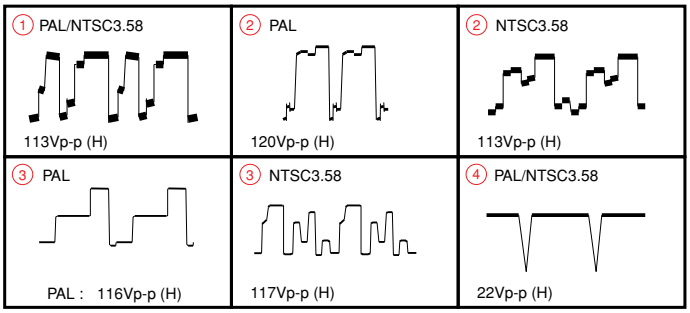
Ref	Pin No	Voltage[v]
J701	G2	(260.4) [258.4]
	H2	*
	KB	120
	KG	(120) [125]
	KR	(117) [119]
Q705	B	8.9
	C	(8.3) [124.4]
	E	(8.3) [0.3]
Q710	B	2.7
	C	8.3
	E	2.0
Q711	B	2.7
	C	8.3
	E	2.0
Q704	B	8.9
	C	(121.7) [123.2]
	E	(8.3) [6.3]
Q706	B	8.9
	C	119
	E	(8.3) [6]
Q707	B	(122) [125.2]
	C	7.3
	E	(120) [125.2]
Q708	B	(120.7) [123.4]
	C	7.4
	E	(118.2) [124.3]
Q709	B	(119) [120.1]
	C	(7.3) [8]
	E	(116) [119.8]
Q712	B	(2.7) [0.3]
	C	(8.3) [6]
	E	(2.1) [1.8]

5-5. WAVEFORMS

A BOARD WAVEFORM



C BOARD WAVEFORM

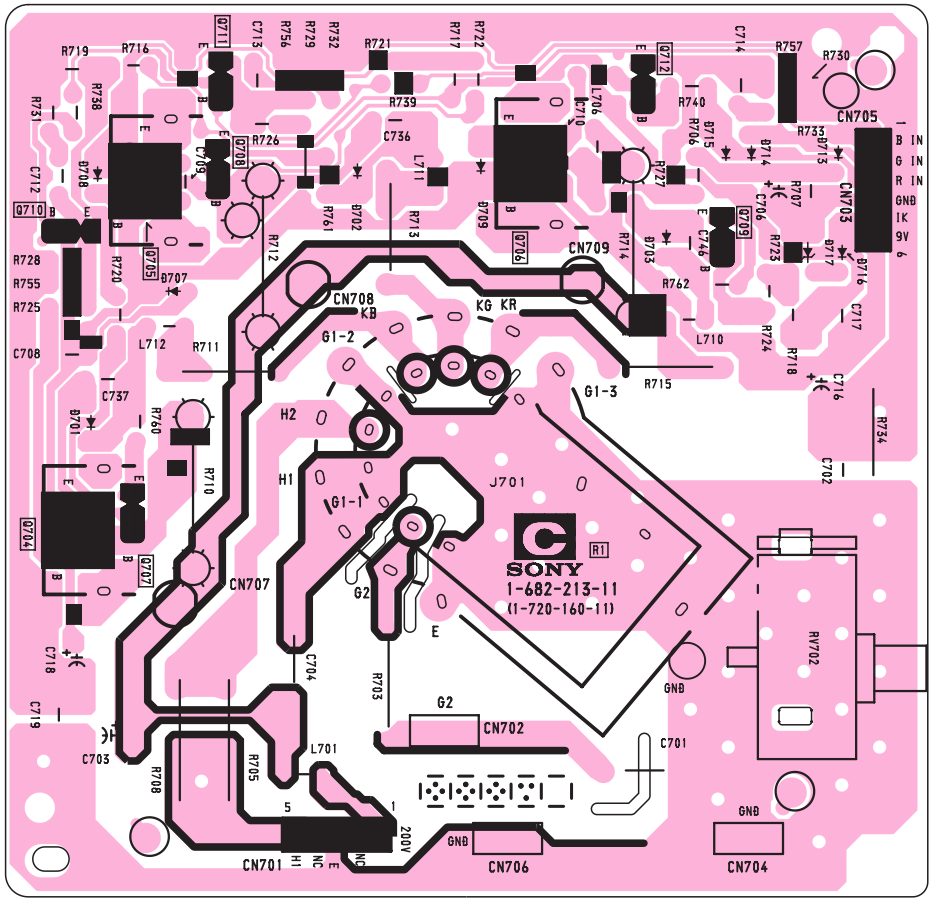


5-6. PRINTED WIRING BOARDS AND PARTS LOCATION

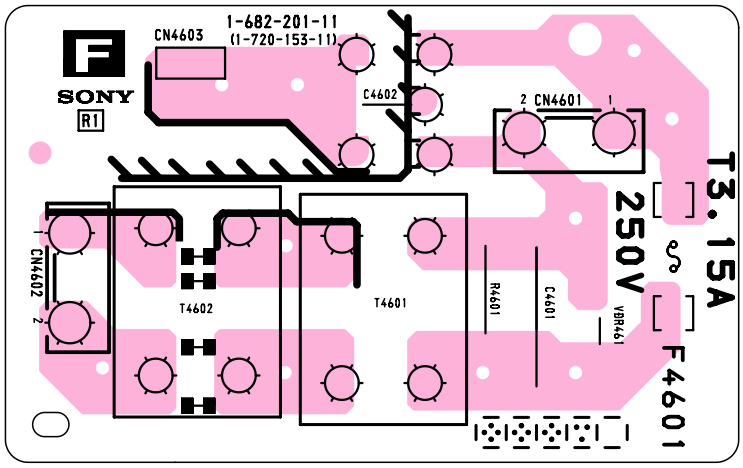
PRINTED WIRING BOARDS

C [RGB OUTPUT] **F** [CISPR]

– C Board –



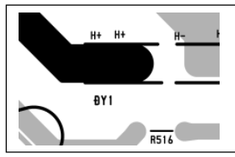
– F Board –



KV-PG14N70
RM-915

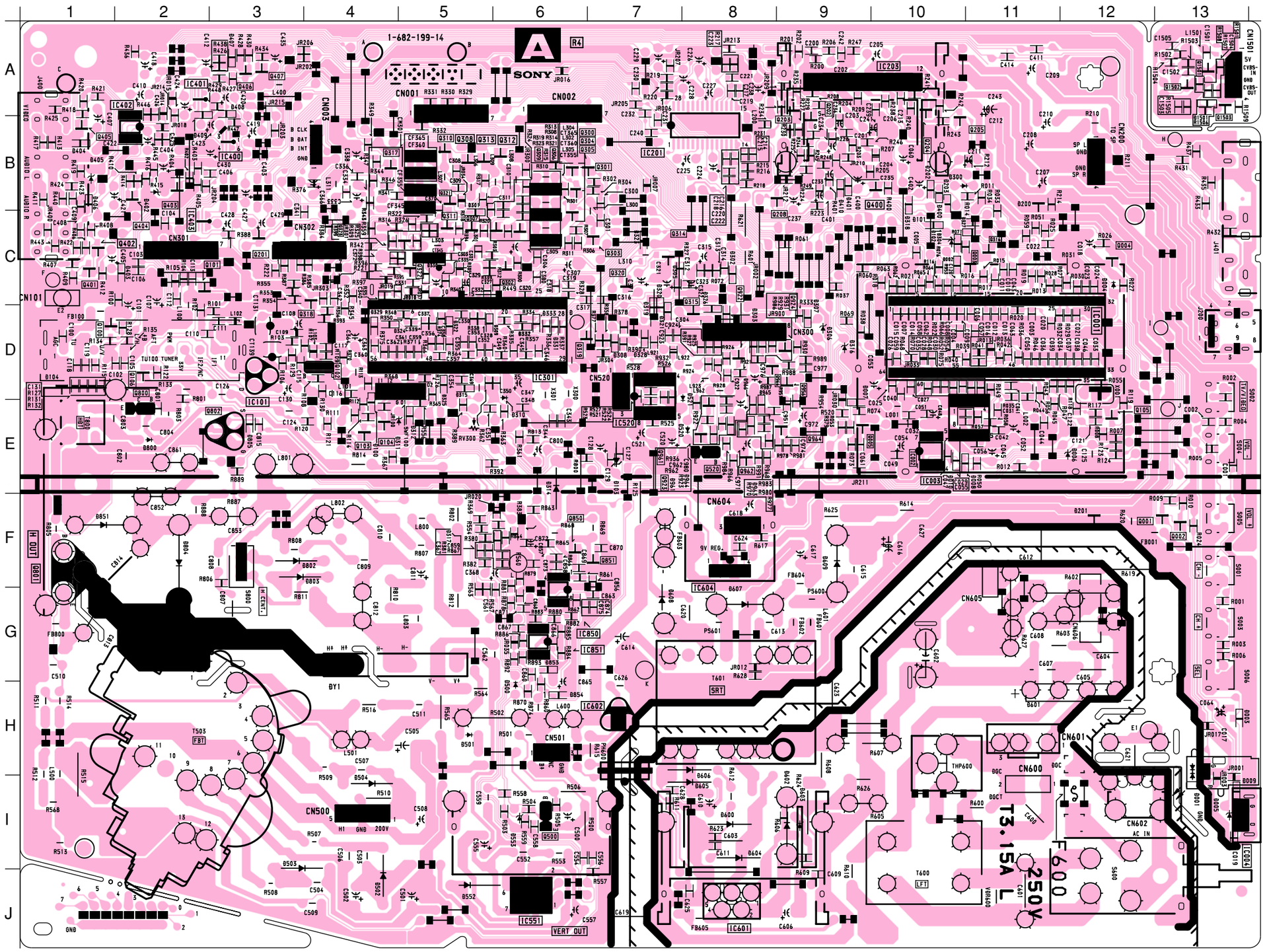
PRINTED WIRING BOARDS

A [POWER SUPPLY,DEFLECTION,AUDIO AND VIDEO PROCESSING, AUDIO/VIDEO INPUT/OUTPUT AND MICROCOMPUTER]



NOTE:
The circuit indicated at left contains high voltage of over 1220 Vp-p. Please pay attention when inspecting or repairing it to prevent an electric shock.

– A Board –



A BOARD

IC

IC001	D-12
IC002	E-10
IC003	E-10
IC004	I-13
IC101	D-3
IC201	B-7
IC203	A-10
IC301	D-6
IC400	B-3
IC401	A-2
IC402	A-2
IC403	C-2
IC520	E-7
IC551	J-6
IC601	J-8
IC602	H-7
IC604	G-8
IC850	G-6
IC851	G-6
PH600	H-7

TRANSISTOR

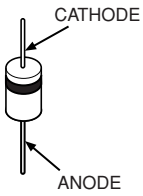
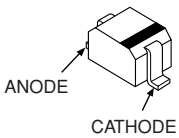
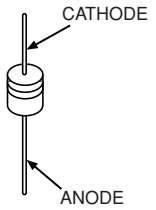
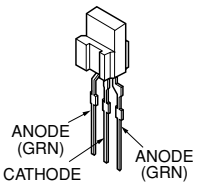
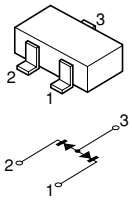
Q001	F-12
Q002	F-13
Q003	C-11
Q004	C-12
Q005	E-10
Q100	D-1
Q101	C-3
Q102	D-4
Q103	E-4
Q104	E-4
Q105	E-12
Q106	D-2
Q201	C-3
Q203	B-9
Q202	A-9
Q204	B-10
Q205	B-11
Q208	C-9
Q300	B-7
Q301	B-7
Q302	C-6
Q303	C-7
Q304	B-7
Q305	B-7
Q306	B-6
Q307	C-5
Q308	B-5
Q309	B-6
Q310	B-5
Q311	C-5
Q312	B-6
Q313	B-5
Q314	C-7
Q315	C-8
Q316	C-11
Q317	B-4
Q318	D-4
Q319	D-6
Q320	C-7
Q321	B-5
Q400	B-10
Q401	C-1
Q402	C-2
Q403	B-2
Q404	C-2
Q405	B-1
Q406	A-3
Q407	A-3
Q500	I-6
Q520	E-8
Q800	D-2
Q802	E-3
Q850	F-6
Q851	F-7
Q922	C-8
Q923	E-7
Q924	C-9
Q956	D-9
Q961	E-7
Q962	E-8
Q964	E-9
Q966	D-9

DIODE

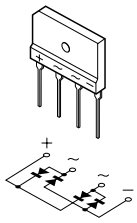
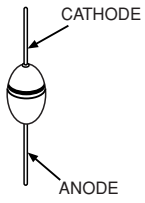
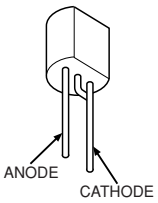
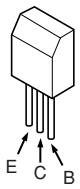
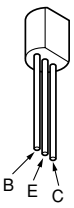
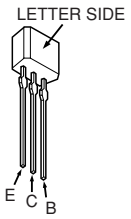
D001	I-13
D002	C-10
D003	H-13
D004	C-12
D005	I-13
D006	E-12
D007	D-9
D008	E-11
D009	I-13
D100	E-4
D101	C-10
D102	C-10
D103	E-7
D104	D-1
D200	B-11
D201	F-12
D202	B-10
D203	B-10
D300	B-10
D301	B-5
D302	C-8
D303	D-8
D304	C-10
D305	C-7
D306	D-9
D307	D-9
D308	D-7
D309	D-6
D310	E-6
D312	E-5
D314	E-6
D315	D-5
D316	D-9
D317	F-5
D318	C-10
D319	D-7
D320	C-7
D321	D-7
D322	D-5
D323	C-7
D324	D-4
D325	D-5
D326	C-8
D327	C-10
D328	D-7
D400	C-10
D401	B-9
D402	B-2
D403	C-2
D404	B-1
D405	B-1
D406	B-1
D407	A-3
D408	A-3
D409	B-2
D410	B-9
D500	H-6
D501	H-5
D502	J-4
D503	I-3
D504	I-4
D520	E-7
D521	D-8
D522	J-5
D553	I-6
D600	I-8
D602	I-9
D603	I-9
D604	I-8
D605	I-8
D606	H-8
D607	G-8
D608	G-7
D609	F-9
D800	E-2
D802	F-4
D803	F-4
D804	F-2
D805	E-3
D851	F-1
D853	G-6
D854	H-6
D961	E-7
D963	E-8
D964	E-8
D965	D-8

5-7. SEMICONDUCTORS

DIODE

					
D1NL20U ELIZ EG01CV1 GPO8D EGP20G HZ361-TE	NNCD8.2A-T1 NNCD9.1A-T1 RU4AM-T3 1SS119-25	RD5.6ESB2 RD5.1SB-T2 UDZSTE-179.1B 1SS355TE-17 RD13SB2	RD2.2ES-B2 RD15ES-B1 S3L20UF4	SPB-25MVWF	DA204K

TRANSISTOR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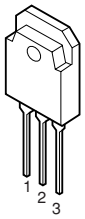
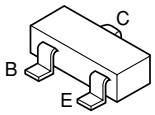
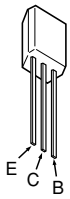
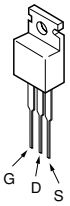
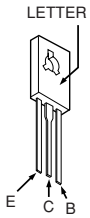
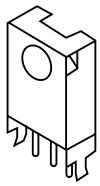
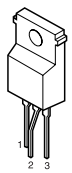
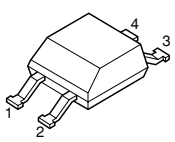
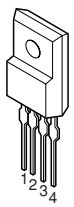
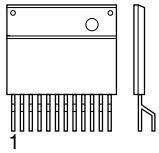
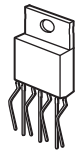
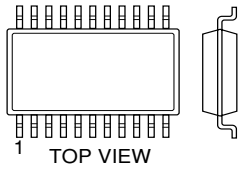
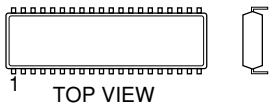
IC

					
2SD2624-CA	MSD601-RT1 MSB709-RT1 UN2211 UN2213 UN2216 2SA1162-G	2SA1091-0	IRF614-005	2SC2611	SBX3081-21 SBX1981-51RP

			MARKING SIDE VIEW  Zig-zag In -line Package Pin 6~99		
SE-135N	PC123F2	PQO9RD11	STR-F6706A (5 PIN) TDA8843/N2 (56 PIN)		AN5522 (7 PIN)

SOP  Small Outline L-Leaded Pin 8~98		DIP  Dual In-line Package Pin 6~98
MM1319AFBE (7 PIN) NJM2903M (8 PIN)		M24C08-BN6 (A)(8 PIN) CXP85220A-083S (64 PIN)

SECTION 6
EXPLODED VIEWS

NOTE:

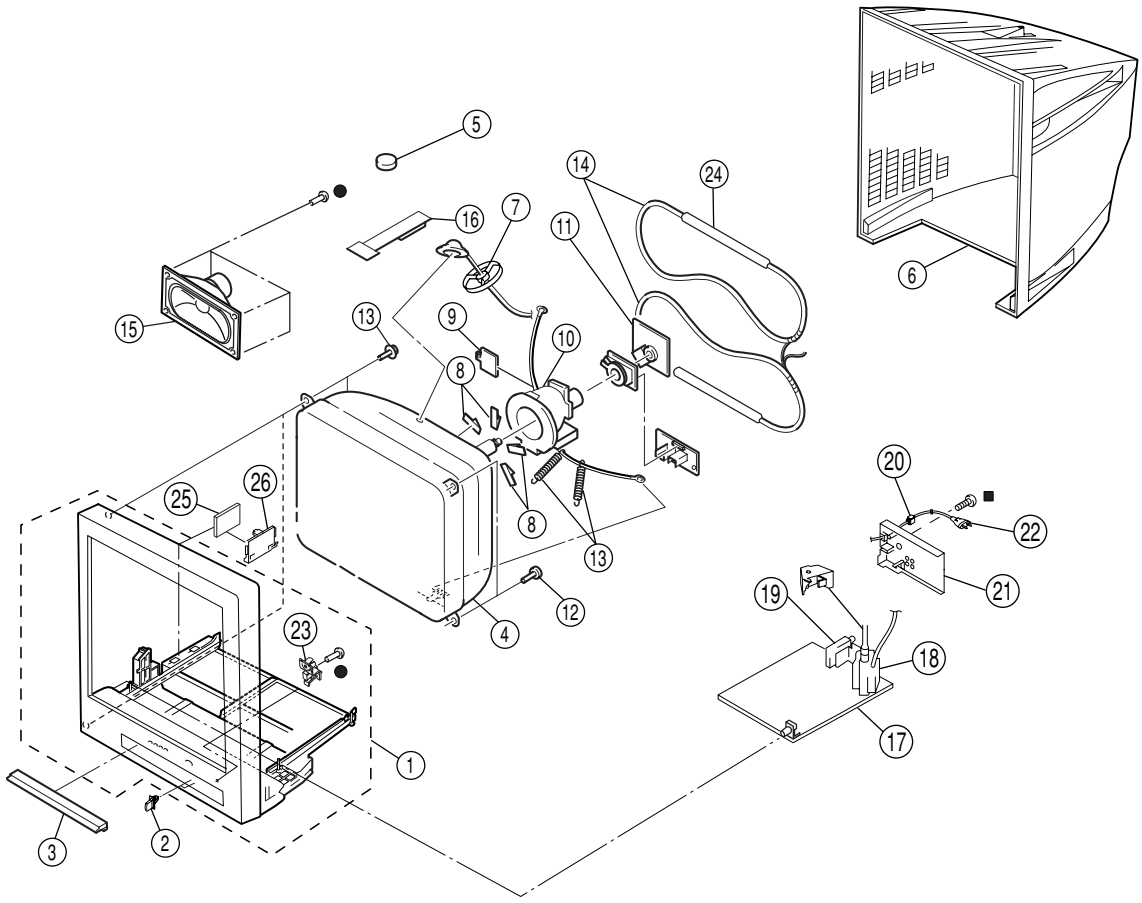
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. PICTURE TUBE AND CHASSIS

● : 7-685-648-79 SCREW +BVTP 3 × 12
■ : 7-685-663-71 SCREW +BVTP 4 × 16

Caution : Do not take out CRT Support block while TV set in standing position.



REF. NO.		PART NO.	DESCRIPTION	REMARK
1		X-4039-672-1	BEZNET ASSY	23
2		4-081-868-01	BUTTON POWER	
3		X-4039-582-1	DOOR ASSY, CONTROL	
4	⚠	8-735-570-05	PICTURE TUBE (A34LRG70X)	
5		1-452-032-00	MAGNET DISC	
6		4-082-275-01	COVER REAR (■ 8 SCREWS)	
7	*	3-704-372-11	HOLDER HV CABLE	
8		4-081-577-01	SPACER (S) DY	
9		4-077-228-02	PIECE TLH CONVERGENCE	
10	⚠	8-451-401-11	DEFLECTION YOKE (Y14RSA-S)	
11	*	A-1332-226-A	C BOARD MOUNTED	
12		4-365-808-01	SCREW(5) TAPPING	
13		4-078-765-01	SPRING EXTENSION	
14	⚠	1-419-185-11	COIL, DEGAUSSING	

REF. NO.		PART NO.	DESCRIPTION	REMARK
15		1-544-965-11	SPEAKER (9 X 5CM)	
16		4-051-736-42	PIECE A (90)CONV, CORRECT	
17	*	A-1300-143-A	A BOARD COMPLETE	
18	⚠	1-453-309-21	TRANSFORMER ASSY FLYBACK (NX-4450//M3A4)	
19		8-598-590-00	TUNER BT-AA401	
20	⚠	4-022-115-00	HOLDER AC CORD	
21	*	4-059-710-31	BRACKET, TERMINAL BOARD	
22	⚠	1-575-023-11	CORD POWER (WITH CONNECTOR)	
23	*	4-081-867-01	BAR OPTICAL	
24	*	4-072-857-02	CUSHION DGC	
25	*	A-1400-175-A	F BOARD MOUNTED	
26		4-049-158-01	BRACKET F1 PC BOARD	

SECTION 7
ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All resistors are in ohms
- F : nonflammable

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

REF NO.	PART NO.	DESCRIPTION	REMARK
*	A-1300-143-A	A BOARD COMPLETE **********	
*	4-055-304-01	HOLDER, LED	
*	4-082-454-01	HOLDER, FBT	
*	4-352-844-01	PIN, LEAD, COATING	
	4-382-854-01	SCREW (M3X8), P, SW (+)	
	4-382-854-21	SCREW (M3X14), P, SW (+)	
	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
		<CAPACITOR>	
C001	1-162-962-11	CERAMIC CHIP 470PF 10.00% 50V	
C002	1-162-962-11	CERAMIC CHIP 470PF 10.00% 50V	
C004	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C005	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C006	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C007	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C009	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C010	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C011	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C012	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C013	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C014	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C015	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C016	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C017	1-126-947-11	ELECT 47UF 20.00% 16V	
C018	1-126-961-11	ELECT 2.2UF 20.00% 50V	
C019	1-162-962-11	CERAMIC CHIP 470PF 10.00% 50V	
C020	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C021	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C022	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C023	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C024	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C025	1-135-834-91	CERAMIC CHIP 2.2E+06PF 6.3V	
C028	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C029	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C030	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C031	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C032	1-162-965-11	CERAMIC CHIP 0.0015UF 10.00% 50V	
C033	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C034	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C035	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C036	1-163-038-91	CERAMIC CHIP 0.1UF 25V	
C037	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C038	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C039	1-163-038-91	CERAMIC CHIP 0.1UF 25V	
C041	1-162-924-11	CERAMIC CHIP 56PF 5.00% 50V	
C042	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C043	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C044	1-162-924-11	CERAMIC CHIP 56PF 5.00% 50V	
C045	1-126-962-11	ELECT 3.3UF 20.00% 50V	
C046	1-162-995-11	CERAMIC CHIP 0.022UF 50V	
C047	1-113-619-11	CERAMIC CHIP 0.47UF 10V	
C048	1-126-965-91	ELECT 22UF 20.00% 50V	
C049	1-163-038-91	CERAMIC CHIP 0.1UF 25V	
C050	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C051	1-163-038-91	CERAMIC CHIP 0.1UF 25V	
C052	1-126-935-11	ELECT 470UF 20.00% 10V	
C053	1-126-935-11	ELECT 470UF 20.00% 10V	
C054	1-104-666-11	ELECT 220UF 20.00% 25V	
C055	1-162-960-11	CERAMIC CHIP 220PF 10.00% 50V	
C056	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C057	1-162-960-11	CERAMIC CHIP 220PF 10.00% 50V	
C058	1-162-960-11	CERAMIC CHIP 220PF 10.00% 50V	
C061	1-162-966-11	CERAMIC CHIP 0.0022UF 10.00% 50V	
C063	1-162-923-11	CERAMIC CHIP 47PF 5.00% 50V	
C100	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C101	1-126-964-11	ELECT 10UF 20.00% 50V	
C106	1-162-968-11	CERAMIC CHIP 0.0047UF 10.00% 50V	
C107	1-126-935-11	ELECT 470UF 20.00% 16V	
C108	1-126-767-11	ELECT 1000UF 20.00% 16V	
C109	1-163-017-00	CERAMIC CHIP 0.0047UF 10.00% 50V	
C111	1-162-922-11	CERAMIC CHIP 39PF 5.00% 50V	
C115	1-216-295-91	SHORT 0	
C116	1-162-968-11	CERAMIC CHIP 0.0047UF 10.00% 50V	
C121	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
C122	1-162-915-11	CERAMIC CHIP 10PF 0.50PF 50V	
C128	1-126-965-91	ELECT 22UF 20.00% 50V	
C129	1-162-970-11	CERAMIC CHIP 0.01UF 10.00% 25V	
C130	1-126-933-11	ELECT 100UF 20.00% 16V	
C131	1-162-966-11	CERAMIC CHIP 0.0022UF 10.00% 50V	
C200	1-162-970-11	CERAMIC CHIP 0.01UF 10.00% 25V	
C202	1-136-169-00	FILM 0.22UF 5.00% 50V	
C205	1-126-961-11	ELECT 2.2UF 20.00% 50V	
C206	1-126-965-91	ELECT 22UF 20.00% 50V	
C209	1-126-942-61	ELECT 1000UF 20.00% 25V	
C210	1-128-551-11	ELECT 22UF 20.00% 25V	
C212	1-126-942-61	ELECT 1000UF 20.00% 25V	
C213	1-162-970-11	CERAMIC CHIP 0.01UF 10.00% 25V	
C242	1-163-037-11	CERAMIC CHIP 0.022UF 10.00% 50V	
C302	1-163-094-00	CERAMIC CHIP 11PF 5.00% 50V	
C303	1-163-112-00	CERAMIC CHIP 62PF 5.00% 50V	
C304	1-119-662-91	CERAMIC CHIP 150PF 1.00% 50V	
C305	1-126-933-11	ELECT 100UF 20.00% 16V	
C306	1-162-968-11	CERAMIC CHIP 0.0047UF 10.00% 50V	
C307	1-126-957-11	ELECT 0.22UF 20.00% 50V	
C311	1-162-962-11	CERAMIC CHIP 470PF 10.00% 50V	
C312	1-162-916-11	CERAMIC CHIP 12PF 5.00% 50V	
C315	1-126-961-11	ELECT 2.2UF 20.00% 50V	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

A

REF NO.	PART NO.	DESCRIPTION			
C317	1-216-295-91	SHORT	0		
C318	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C319	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C320	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C321	1-126-963-11	ELECT	4.7UF	20.00%	50V
C323	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C327	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C328	1-164-222-91	CERAMIC CHIP	0.22UF		25V
C329	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C330	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C332	1-126-933-11	ELECT	100UF	20.00%	16V
C335	1-126-947-11	ELECT	47UF	20.00%	16V
C337	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C339	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C341	1-113-619-11	CERAMIC CHIP	0.47UF		10V
C342	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C343	1-162-917-11	CERAMIC CHIP	15PF	5.00%	50V
C344	1-162-917-11	CERAMIC CHIP	15PF	5.00%	50V
C345	1-162-967-11	CERAMIC CHIP	0.0033UF	10.00%	50V
C346	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C347	1-126-933-11	ELECT	100UF	20.00%	16V
C348	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C349	1-164-346-11	CERAMIC CHIP	1UF		16V
C352	1-162-966-11	CERAMIC CHIP	0.0022UF	10.00%	50V
C353	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C354	1-162-968-11	CERAMIC CHIP	0.0047UF	10.00%	50V
C355	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C356	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C357	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C358	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C359	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C360	1-130-495-00	MYLAR	0.1UF	5.00%	50V
C361	1-135-834-91	CERAMIC CHIP	2.2E+06PF		6.3V
C362	1-113-619-11	CERAMIC CHIP	0.47UF		10V
C363	1-162-968-11	CERAMIC CHIP	0.0047UF	10.00%	50V
C364	1-126-964-11	ELECT	10UF	20.00%	50V
C366	1-126-933-11	ELECT	100UF	20.00%	16V
C369	1-137-194-81	FILM	0.47UF	5.00%	50V
C370	1-216-295-91	SHORT	0		
C400	1-126-934-11	ELECT	220UF	20.00%	16V
C405	1-126-960-11	ELECT	1UF	20.00%	50V
C406	1-115-156-11	CERAMIC CHIP	1UF		10V
C407	1-126-934-11	ELECT	220UF	20.00%	16V
C409	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C410	1-126-933-11	ELECT	100UF	20.00%	16V
C412	1-128-551-11	ELECT	22UF	20.00%	25V
C414	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C418	1-126-933-11	ELECT	100UF	20.00%	16V
C419	1-126-964-11	ELECT	10UF	20.00%	50V
C421	1-126-964-11	ELECT	10UF	20.00%	50V
C422	1-126-964-11	ELECT	10UF	20.00%	50V
C425	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C430	1-126-964-11	ELECT	10UF	20.00%	50V
C435	1-126-934-11	ELECT	220UF	20.00%	16V
C500	1-126-933-11	ELECT	100UF	20.00%	16V
C501	1-104-666-11	ELECT	220UF	20.00%	25V
C502	1-104-666-11	ELECT	220UF	20.00%	25V
C503	1-162-318-11	CERAMIC	0.001UF	10.00%	500V
C504	1-162-318-11	CERAMIC	0.001UF	10.00%	500V
C505	1-123-024-21	ELECT	33UF		160V

REF NO.		PART NO.	DESCRIPTION			
C507		1-102-228-00	CERAMIC	470PF	10.00%	500V
C508		1-107-654-11	ELECT	33UF	20.00%	250V
C509		1-137-350-11	MYLAR	0.015UF	10.00%	100V
C510		1-106-379-12	MYLAR	0.033UF	10.00%	100V
C552		1-137-194-81	FILM	0.47UF	5.00%	50V
C554		1-163-035-00	CERAMIC CHIP	0.047UF		50V
C555		1-126-949-11	ELECT	220UF	20.00%	35V
C556		1-163-038-91	CERAMIC CHIP	0.1UF		25V
C557		1-126-948-11	ELECT	100UF	20.00%	35V
C558		1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C559		1-106-220-00	MYLAR	0.1UF	10.00%	100V
C561		1-162-968-11	CERAMIC CHIP	0.0047UF	10.00%	50V
C562		1-137-401-11	MYLAR	0.22UF	10.00%	100V
C600		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C601	⚠	1-115-165-11	FILM	0.1UF	20.00%	275V
C602		1-117-751-11	ELECT(BLOCK)	220UF	20.00%	450V
C603		1-117-619-11	FILM	1000PF	3.00%	1.2KV
C604		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C605		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C606		1-104-666-11	ELECT	220UF	20.00%	25V
C607		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C608		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C609		1-162-962-11	CERAMIC CHIP	470PF	10.00%	50V
C610		1-126-948-11	ELECT	100UF	20.00%	35V
C611		1-163-145-00	CERAMIC CHIP	0.0015UF	5.00%	50V
C614		1-123-024-21	ELECT	33UF		160V
C615		1-102-228-00	CERAMIC	470PF	10.00%	500V
C616		1-126-943-11	ELECT	2200UF	20.00%	25V
C617		1-126-967-11	ELECT	47UF	20.00%	50V
C618		1-126-933-11	ELECT	100UF	20.00%	16V
C619	⚠	1-119-886-51	CERAMIC	470PF	10.00%	250V
C620		1-162-134-11	CERAMIC	470PF	10.00%	2KV
C623		1-119-886-51	CERAMIC	470PF	10.00%	250V
C626		1-106-383-00	MYLAR	0.047UF	10.00%	200V
C628		1-162-962-11	CERAMIC CHIP	470PF	10.00%	50V
C800		1-126-960-11	ELECT	1UF	20.00%	50V
C801		1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C802		1-106-375-12	MYLAR	0.022UF	99%	200V
C803		1-102-244-00	CERAMIC	220PF	10.00%	500V
C804		1-162-318-11	CERAMIC	0.001UF	10.00%	500V
C807		1-162-115-00	CERAMIC	330PF	10.00%	2KV
C808		1-106-365-00	MYLAR	0.0082UF	10.00%	200V
C809		1-107-364-11	MYLAR	0.01UF	10.00%	200V
C810		1-106-375-12	MYLAR	0.022UF	99%	200V
C811		1-107-957-11	ELECT	1UF	20.00%	250V
C812		1-117-664-11	FILM	0.27UF	5.00%	250V
C813		1-161-754-00	CERAMIC	0.001UF	10.00%	2KV
C813		1-161-754-00	CERAMIC	0.001UF	10.00%	2KV
C814		1-117-644-11	FILM	10000PF	3.00%	1.2KV
C852		1-117-661-71	FILM	0.15UF	5.00%	250V
C856		1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C857		1-126-964-11	ELECT	10UF	20.00%	50V
C858		1-162-974-11	CERAMIC CHIP	0.01UF		50V
C859		1-162-974-11	CERAMIC CHIP	0.01UF		50V
C860		1-208-834-11	METAL CHIP	150K	0.5%	1/10W
C863		1-216-295-91	SHORT	0		
C865		1-126-933-11	ELECT	100UF	20.00%	16V
C866		1-162-974-11	CERAMIC CHIP	0.01UF		50V
C867		1-162-966-11	CERAMIC CHIP	0.0022UF	10.00%	50V
C868		1-162-995-11	CERAMIC CHIP	0.022UF		50V

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REF NO.	PART NO.	DESCRIPTION			REMARK
C869	1-115-339-11	CERAMIC CHIP	0.1UF	10.00% 50V	
C870	1-162-960-11	CERAMIC CHIP	220PF	10.00% 50V	
C872	1-163-038-91	CERAMIC CHIP	0.1UF	25V	
C873	1-162-974-11	CERAMIC CHIP	0.01UF	50V	
C874	1-162-974-11	CERAMIC CHIP	0.01UF	50V	
C875	1-163-038-91	CERAMIC CHIP	0.1UF	25V	
		<FILTER>			
CF345	1-234-684-21	FILTER, BAND PASS (F4.5C)			
		<######### >			
CLP002	4-352-844-01	PIN, LEAD, COATING			
		<CONNECTOR>			
CN003	* 1-508-797-00	PIN, CONNECTOR 4P			
CN101	1-695-915-11	TAB (CONTACT)			
CN200	* 1-564-506-11	PLUG, CONNECTOR 3P			
CN300	* 1-564-509-11	PLUG, CONNECTOR 6P			
CN500	* 1-564-508-11	PLUG, CONNECTOR 5P			
CN600	* 1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P			
CN601	* 1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P			
CN602	1-580-843-11	PIN, CONNECTOR (POWER)			
		<TRIMMER>			
CT131	1-249-404-00	CARBON	82	5% 1/4W	
CT345	1-795-342-21	TRAP, CERAMIC (T4.5C)			
		<DIODE>			
D001	8-719-083-18	DIODE SPB-25MVWF			
D004	8-719-911-19	1SS119-25			
D005	8-719-109-89	RD5.6ESB2			
D006	8-719-109-89	RD5.6ESB2			
D007	8-719-159-10	RD5.1SB-T2			
D009	8-719-159-10	RD5.1SB-T2			
D103	8-759-157-40	UPC574J			
D104	8-719-914-42	DA204K			
D200	8-719-914-42	DA204K			
D202	8-719-988-61	1SS355TE-17			
D203	8-719-988-61	1SS355TE-17			
D301	8-719-988-61	1SS355TE-17			
D304	8-719-063-66	HZS361-TE			
D305	8-719-988-61	1SS355TE-17			
D306	8-719-109-54	RD2.2ES-B2			
D307	8-719-988-61	1SS355TE-17			
D308	8-719-988-61	1SS355TE-17			
D309	8-719-069-60	UDZSTE-179.1B			
D310	8-719-911-19	1SS119-25			
D311	8-719-070-15	NNCD8.2A-T1			
D312	8-719-069-60	UDZSTE-179.1B			
D314	8-719-908-03	GP08D			
D315	8-719-988-61	1SS355TE-17			
D318	8-719-988-61	1SS355TE-17			
D319	8-719-988-61	1SS355TE-17			
D320	8-719-988-61	1SS355TE-17			
D321	8-719-988-61	1SS355TE-17			
D322	8-719-069-60	UDZSTE-179.1B			

REF NO.	PART NO.	DESCRIPTION	REMARK
D323	8-719-069-60	UDZSTE-179.1B	
D324	8-719-069-60	UDZSTE-179.1B	
D325	8-719-069-60	UDZSTE-179.1B	
D326	8-719-988-61	1SS355TE-17	
D327	8-719-988-61	1SS355TE-17	
D329	8-719-109-89	RD5.6ESB2	
D330	8-719-109-89	RD5.6ESB2	
D400	8-719-988-61	1SS355TE-17	
D401	8-719-988-61	1SS355TE-17	
D403	8-719-069-60	UDZSTE-179.1B	
D404	8-719-069-60	UDZSTE-179.1B	
D406	8-719-069-60	UDZSTE-179.1B	
D407	8-719-069-60	UDZSTE-179.1B	
D408	8-719-069-60	UDZSTE-179.1B	
D500	8-719-911-19	1SS119-25	
D501	8-719-911-19	1SS119-25	
D502	8-719-302-43	EL1Z	
D503	8-719-302-43	EL1Z	
D504	8-719-302-43	EL1Z	
D552	8-719-908-03	GP08D	
D553	8-719-109-89	RD5.6ESB2	
D600	8-719-030-33	DIODE EG01CV1	
D601	8-719-077-77	D3SB60F3	
D602	8-719-084-25	DIODE RM2LF-C4	
D603	8-719-110-39	RD15ES-B1	
D604	8-719-063-70	D1NL20U	
D605	8-719-063-70	D1NL20U	
D606	8-719-063-70	D1NL20U	
D608	8-719-31210	RU4AM-T3	
D609	8-719-510-73	S3L20UF4	
D800	8-719-911-19	1SS119-25	
D802	8-719-908-03	GP08D	
D803	8-719-908-03	GP08D	
D804	8-719-081-00	DIODE BY228/A52A/	
D805	8-719-069-60	UDZSTE-179.1B	
D851	8-719-979-85	EGP20G	
D853	8-719-988-61	1SS355TE-17	
D854	8-719-158-53	RD13SB2	
		<CONNECTOR>	
DY1	* 1-580-798-11	CONNECTOR PIN (DY) 6P	
		<FERRITE BEAD>	
FB001	1-410-397-21	FERRITE 1.1UH	
FB100	1-410-396-71	FERRITE 0.45UH	
FB602	1-410-397-21	FERRITE 1.1UH	
FB603	1-412-911-31	FERRITE 0UH	
FB800	1-410-397-21	FERRITE 1.1UH	
		<IC>	
IC001	8-752-925-68	IC CXP85220A-083S	
IC002	8-759-371-21	MM1319AFBE	
IC003	8-759-672-78	M24C08-BN6(A)	
IC004	8-742-134-01	SBX1981-51RP	
IC101	8-759-231-53	TA7805S	
IC203	6-700-036-01	IC AN5279	
IC301	6-700-145-01	IC TDA8843/N2	
IC400	6-700-033-01	IC MM1501XNRE	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF NO.	PART NO.	DESCRIPTION	REMARK
IC402	8-759-649-89	IC MC4558CD	
IC551	8-759-835-98	IC AN5522	
IC601	8-749-019-43	IC STR-F6706A	
IC602	8-749-920-61	SE-135N	
IC604	8-759-459-99	PQ09RD11	
IC850	8-759-700-07	NJM2903M	
IC851	8-759-649-89	IC MC4558CD	
		<JACK>	
J200	1-770-785-12	JACK	
J400	1-779-849-11	JACK BLOCK, PIN 4P	
J401	1-779-205-11	JACK, PIN 2P	
		<CHIP CONDUCTOR>	
JR001	1-216-295-91	SHORT 0	
JR002	1-216-295-91	SHORT 0	
JR003	1-216-295-91	SHORT 0	
JR012	1-216-295-91	SHORT 0	
JR013	1-216-295-91	SHORT 0	
JR014	1-216-295-91	SHORT 0	
JR015	1-216-295-91	SHORT 0	
JR018	1-216-295-91	SHORT 0	
JR020	1-216-295-91	SHORT 0	
JR035	1-216-295-91	SHORT 0	
JR036	1-216-295-91	SHORT 0	
JR100	1-216-295-91	SHORT 0	
JR202	1-216-295-91	SHORT 0	
JR212	1-216-295-91	SHORT 0	
JR214	1-216-295-91	SHORT 0	
JR301	1-216-295-91	SHORT 0	
JR304	1-216-295-91	SHORT 0	
		<COIL>	
L001	1-414-855-31	INDUCTOR 1UH	
L002	1-414-184-41	INDUCTOR 15UH	
L100	1-414-856-11	INDUCTOR 10UH	
L102	1-410-987-42	INDUCTOR 0.33UH	
L301	1-410-512-11	INDUCTOR 18UH	
L303	1-410-512-11	INDUCTOR 18UH	
L309	1-410-502-11	INDUCTOR 2.7UH	
L400	1-414-187-11	INDUCTOR 47UH	
L500	1-408-947-00	INDUCTOR 2.2MH	
L600	1-412-533-21	INDUCTOR 47UH	
L800	1-406-677-11	INDUCTOR 10MH	
L802	1-424-795-11	COIL, HORIZONTAL LINEARITY	
L803	1-414-493-41	INDUCTOR 4.7MH	
		<PHOTO COUPLER>	
PH600 ⚠	8-749-010-64	PC123F2	
		<IC LINK>	
PS600	1-533-597-41	LINK, IC	
PS601	1-533-597-41	LINK, IC	

REF NO.	PART NO.	DESCRIPTION			REMARK
		<TRANSISTOR>			
Q001	8-729-421-19	UN2213			
Q002	8-729-421-19	UN2213			
Q003	8-729-010-25	MSD601-RT1			
Q004	8-729-010-25	MSD601-RT1			
Q005	8-729-421-19	UN2213			
Q100	8-729-010-25	MSD601-RT1			
Q105	8-729-010-25	MSD601-RT1			
Q201	8-729-010-25	MSD601-RT1			
Q204	8-729-216-22	2SA1162-G			
Q205	8-729-421-22	UN2211			
Q302	8-729-010-05	MSB709-RT1			
Q311	8-729-010-25	MSD601-RT1			
Q313	8-729-424-67	UN2216			
Q315	8-729-010-25	MSD601-RT1			
Q318	8-729-010-25	MSD601-RT1			
Q320	8-729-421-22	UN2211			
Q321	8-729-424-67	UN2216			
Q400	8-729-010-05	MSB709-RT1			
Q401	8-729-424-67	UN2216			
Q404	8-729-010-05	MSB709-RT1			
Q405	8-729-010-05	MSB709-RT1			
Q406	8-729-010-25	MSD601-RT1			
Q407	8-729-010-25	MSD601-RT1			
Q500	8-729-200-17	2SA1091-O			
Q800	8-729-140-50	2SC3209LK			
Q801	8-729-055-74	TRANSISTOR 2SD2624-CA			
Q802	8-729-050-48	TRANSISTOR IRF614-005			
Q850	8-729-010-25	MSD601-RT1			
Q851	8-729-010-05	MSB709-RT1			
		<RESISTOR>			
R001	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R002	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R003	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R004	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R005	1-216-043-91	RES-CHIP	560	5%	1/10W
R006	1-216-043-91	RES-CHIP	560	5%	1/10W
R007	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R008	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R009	1-216-037-00	RES-CHIP	330	5%	1/10W
R010	1-216-037-00	RES-CHIP	330	5%	1/10W
R011	1-216-295-91	SHORT	0		
R012	1-216-049-11	RES-CHIP	1K	5%	1/10W
R013	1-216-041-00	RES-CHIP	470	5%	1/10W
R014	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R015	1-216-025-11	RES-CHIP	100	5%	1/10W
R016	1-216-037-00	RES-CHIP	330	5%	1/10W
R017	1-216-049-11	RES-CHIP	1K	5%	1/10W
R018	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R019	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R020	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R022	1-216-049-11	RES-CHIP	1K	5%	1/10W
R024	1-216-025-11	RES-CHIP	100	5%	1/10W
R025	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R026	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R027	1-216-101-00	RES-CHIP	150K	5%	1/10W
R028	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R029	1-216-025-11	RES-CHIP	100	5%	1/10W

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REF NO.	PART NO.	DESCRIPTION		REMARK	
R031	1-216-025-11	RES-CHIP	100	5%	1/10W
R032	1-216-049-11	RES-CHIP	1K	5%	1/10W
R033	1-216-073-91	RES-CHIP	10K	5%	1/10W
R035	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R036	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R039	1-216-043-91	RES-CHIP	560	5%	1/10W
R042	1-216-039-00	RES-CHIP	390	5%	1/10W
R043	1-216-025-11	RES-CHIP	100	5%	1/10W
R044	1-216-033-00	RES-CHIP	220	5%	1/10W
R045	1-216-073-91	RES-CHIP	10K	5%	1/10W
R046	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R047	1-216-025-11	RES-CHIP	100	5%	1/10W
R048	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R049	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R050	1-208-820-11	METAL CHIP	39K	0.5%	1/10W
R051	1-216-073-91	RES-CHIP	10K	5%	1/10W
R052	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R053	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R054	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R055	1-216-049-11	RES-CHIP	1K	5%	1/10W
R056	1-216-049-11	RES-CHIP	1K	5%	1/10W
R057	1-216-025-11	RES-CHIP	100	5%	1/10W
R058	1-216-025-11	RES-CHIP	100	5%	1/10W
R059	1-216-033-00	RES-CHIP	220	5%	1/10W
R060	1-216-033-00	RES-CHIP	220	5%	1/10W
R061	1-216-033-00	RES-CHIP	220	5%	1/10W
R064	1-216-049-11	RES-CHIP	1K	5%	1/10W
R066	1-216-049-11	RES-CHIP	1K	5%	1/10W
R072	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R073	1-216-081-00	RES-CHIP	22K	5%	1/10W
R074	1-216-049-11	RES-CHIP	1K	5%	1/10W
R076	1-216-025-11	RES-CHIP	100	5%	1/10W
R077	1-216-025-11	RES-CHIP	100	5%	1/10W
R100	1-216-049-11	RES-CHIP	1K	5%	1/10W
R103	1-211-981-11	METAL CHIP	33	0.5%	1/10W
R107	1-410-993-42	INDUCTOR	1UH		
R108	1-216-295-91	SHORT	0		
R117	1-216-081-00	RES-CHIP	22K	5%	1/10W
R118	1-216-041-00	RES-CHIP	470	5%	1/10W
R119	1-216-081-00	RES-CHIP	22K	5%	1/10W
R124	1-216-081-00	RES-CHIP	22K	5%	1/10W
R125	1-215-925-11	METAL OXIDE	22K	5%	3W
R128	1-216-025-11	RES-CHIP	100	5%	1/10W
R129	1-211-977-11	METAL CHIP	22	0.5%	1/10W
R133	1-249-389-11	CARBON	4.7	5%	1/4W
R134	1-216-049-11	RES-CHIP	1K	5%	1/10W
R135	1-216-049-11	RES-CHIP	1K	5%	1/10W
R200	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R201	1-216-049-11	RES-CHIP	1K	5%	1/10W
R206	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R209	1-216-073-91	RES-CHIP	10K	5%	1/10W
R211	1-249-409-11	CARBON	220	5%	1/4W
R212	1-216-049-11	RES-CHIP	1K	5%	1/10W
R214	1-216-295-91	SHORT	0		
R221	1-216-025-11	RES-CHIP	100	5%	1/10W
R222	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R240	1-216-077-91	RES-CHIP	15K	5%	1/10W
R241	1-216-077-91	RES-CHIP	15K	5%	1/10W
R242	1-216-073-91	RES-CHIP	10K	5%	1/10W
R243	1-216-073-91	RES-CHIP	10K	5%	1/10W

REF NO.	PART NO.	DESCRIPTION		REMARK	
R300	1-216-033-00	RES-CHIP	220	5%	1/10W
R303	1-216-033-00	RES-CHIP	220	5%	1/10W
R305	1-216-045-00	RES-CHIP	680	5%	1/10W
R309	1-216-041-00	RES-CHIP	470	5%	1/10W
R312	1-216-033-00	RES-CHIP	220	5%	1/10W
R316	1-216-031-00	RES-CHIP	180	5%	1/10W
R324	1-216-041-00	RES-CHIP	470	5%	1/10W
R325	1-216-081-00	RES-CHIP	22K	5%	1/10W
R326	1-216-081-00	RES-CHIP	22K	5%	1/10W
R327	1-216-049-11	RES-CHIP	1K	5%	1/10W
R328	1-216-025-11	RES-CHIP	100	5%	1/10W
R329	1-216-043-91	RES-CHIP	560	5%	1/10W
R330	1-216-295-91	SHORT	0		
R331	1-216-295-91	SHORT	0		
R332	1-216-295-91	SHORT	0		
R333	1-216-025-11	RES-CHIP	100	5%	1/10W
R334	1-216-025-11	RES-CHIP	100	5%	1/10W
R335	1-216-025-11	RES-CHIP	100	5%	1/10W
R336	1-216-025-11	RES-CHIP	100	5%	1/10W
R337	1-216-073-91	RES-CHIP	10K	5%	1/10W
R338	1-216-077-91	RES-CHIP	15K	5%	1/10W
R339	1-216-035-00	RES-CHIP	270	5%	1/10W
R340	1-162-974-11	CERAMIC CHIP	0.01UF		50V
R342	1-216-295-91	SHORT	0		
R345	1-216-025-11	RES-CHIP	100	5%	1/10W
R348	1-216-025-11	RES-CHIP	100	5%	1/10W
R350	1-216-039-00	RES-CHIP	390	5%	1/10W
R352	1-216-073-91	RES-CHIP	10K	5%	1/10W
R353	1-216-119-00	RES-CHIP	820K	5%	1/10W
R354	1-216-119-00	RES-CHIP	820K	5%	1/10W
R355	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R356	1-216-049-11	RES-CHIP	1K	5%	1/10W
R357	1-216-101-00	RES-CHIP	150K	5%	1/10W
R358	1-216-025-11	RES-CHIP	100	5%	1/10W
R360	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R361	1-216-033-00	RES-CHIP	220	5%	1/10W
R362	1-216-083-00	RES-CHIP	27K	5%	1/10W
R363	1-216-295-91	SHORT	0		
R364	1-216-077-91	RES-CHIP	15K	5%	1/10W
R365	1-216-295-91	SHORT	0		
R367	1-216-099-00	RES-CHIP	120K	5%	1/10W
R368	1-216-049-11	RES-CHIP	1K	5%	1/10W
R369	1-216-123-11	RES-CHIP	1.2M	5%	1/10W
R370	1-216-083-00	RES-CHIP	27K	5%	1/10W
R371	1-208-820-11	METAL CHIP	39K	0.5%	1/10W
R374	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R376	1-216-295-91	SHORT	0		
R385	1-216-295-91	SHORT	0		
R386	1-216-295-91	SHORT	0		
R389	1-216-109-00	RES-CHIP	330K	5%	1/10W
R390	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R391	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R392	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R393	1-216-049-11	RES-CHIP	1K	5%	1/10W
R394	1-247-852-11	CARBON	7.5K	5%	1/4W
R400	1-216-295-91	SHORT	0		
R401	1-216-049-11	RES-CHIP	1K	5%	1/10W
R409	1-216-113-00	RES-CHIP	470K	5%	1/10W
R410	1-216-025-11	RES-CHIP	100	5%	1/10W
R411	1-216-049-11	RES-CHIP	1K	5%	1/10W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

A

REF NO.	PART NO.	DESCRIPTION		REMARK	
R412	1-216-049-11	RES-CHIP	1K	5%	1/10W
R413	1-216-113-00	RES-CHIP	470K	5%	1/10W
R414	1-216-049-11	RES-CHIP	1K	5%	1/10W
R415	1-216-073-91	RES-CHIP	10K	5%	1/10W
R416	1-216-073-91	RES-CHIP	10K	5%	1/10W
R417	1-216-021-00	RES-CHIP	68	5%	1/10W
R418	1-216-025-11	RES-CHIP	100	5%	1/10W
R420	1-216-049-11	RES-CHIP	1K	5%	1/10W
R421	1-216-049-11	RES-CHIP	1K	5%	1/10W
R423	1-208-820-11	METAL CHIP	39K	0.5%	1/10W
R424	1-216-091-00	RES-CHIP	56K	5%	1/10W
R425	1-216-022-00	RES-CHIP	75	5%	1/10W
R426	1-216-049-11	RES-CHIP	1K	5%	1/10W
R427	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R428	1-216-041-00	RES-CHIP	470	5%	1/10W
R429	1-216-073-91	RES-CHIP	10K	5%	1/10W
R430	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R432	1-216-121-11	RES-CHIP	1M	5%	1/10W
R433	1-216-091-00	RES-CHIP	56K	5%	1/10W
R434	1-216-049-11	RES-CHIP	1K	5%	1/10W
R436	1-216-022-00	RES-CHIP	75	5%	1/10W
R438	1-216-049-11	RES-CHIP	1K	5%	1/10W
R440	1-216-121-11	RES-CHIP	1M	5%	1/10W
R445	1-216-089-91	RES-CHIP	47K	5%	1/10W
R447	1-216-025-11	RES-CHIP	100	5%	1/10W
R500	1-260-126-81	CARBON	180K	5%	1/2W
R501	1-249-418-11	CARBON	1.2K	5%	1/4W
R502	1-216-371-00	METAL OXIDE	1.5	5%	2W
R502	1-216-371-00	METAL OXIDE	1.5	5%	2W
R503	1-216-091-00	RES-CHIP	56K	5%	1/10W
R504	1-216-091-00	RES-CHIP	56K	5%	1/10W
R505	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R506	1-260-125-11	CARBON	150K	5%	1/2W
R507	1-260-288-11	CARBON	0.47	5%	1/2W
R508	1-260-288-11	CARBON	0.47	5%	1/2W
R509	1-260-288-11	CARBON	0.47	5%	1/2W
R510	1-260-127-11	CARBON	220K	5%	1/2W
R511	1-215-463-00	METAL	56K	1%	1/4W
R512	1-215-453-00	METAL	22K	1%	1/4W
R513	1-215-449-00	METAL	15K	1%	1/4W
R514	1-249-421-11	CARBON	2.2K	5%	1/4W
R553	1-249-385-11	CARBON	2.2	5%	1/4W
R554	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R557	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R558	1-216-081-00	RES-CHIP	22K	5%	1/10W
R559	1-216-089-91	RES-CHIP	47K	5%	1/10W
R563	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R564	1-215-865-11	METAL OXIDE	220	5%	1W
R565	1-216-350-11	METAL OXIDE	1.2	5%	1W
R567	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R568	1-215-457-00	METAL	33K	1%	1/4W
R600	1-215-915-11	METAL OXIDE	470	5%	3W
R602	1-205-997-11	CEMENTED	2.2	5%	10W
R605	1-207-615-00	METAL	0.33	10%	2W
R606	1-216-045-00	RES-CHIP	680	5%	1/10W
R608	1-260-129-11	CARBON	330K	5%	1/2W
R609	1-216-097-11	RES-CHIP	100K	5%	1/10W
R610	1-215-926-00	METAL OXIDE	33K	5%	3W
R611	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R612	1-249-419-11	CARBON	1.5K	5%	1/4W
R614	1-216-397-11	METAL OXIDE	4.7	5%	3W

REF NO.		PART NO.	DESCRIPTION		REMARK	
R615		1-215-877-11	METAL OXIDE	22K	5%	1W
R617		1-216-049-11	RES-CHIP	1K	5%	1/10W
R619	⚠	1-240-917-81	METAL	8.2M	5%	1W
R620		1-249-389-11	CARBON	4.7	5%	1/4W
R623		1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R624		1-260-125-11	CARBON	150K	5%	1/2W
R625		1-216-397-11	METAL OXIDE	4.7	5%	3W
R626		1-260-292-11	CARBON	1	5%	1/2W
R628		1-216-295-91	SHORT	0		
R800		1-216-049-11	RES-CHIP	1K	5%	1/10W
R801		1-216-081-00	RES-CHIP	22K	5%	1/10W
R802		1-215-919-11	METAL OXIDE	2.2K	5%	3W
R803		1-260-332-51	CARBON	2.2K	5%	1/2W
R806		1-216-295-91	SHORT	0		
R808		1-249-421-11	CARBON	2.2K	5%	1/4W
R810		1-215-886-11	METAL OXIDE	100	5%	2W
R811		1-215-911-11	METAL OXIDE	100	5%	3W
R812		1-215-919-11	METAL OXIDE	2.2K	5%	3W
R813		1-216-049-11	RES-CHIP	1K	5%	1/10W
R860		1-216-103-00	RES-CHIP	180K	5%	1/10W
R861		1-216-295-91	SHORT	0		
R862		1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R863		1-216-073-91	RES-CHIP	10K	5%	1/10W
R864		1-208-794-11	METAL CHIP	3.3K	0.5%	1/10W
R865		1-216-073-91	RES-CHIP	10K	5%	1/10W
R866		1-216-049-11	RES-CHIP	1K	5%	1/10W
R867		1-208-812-11	METAL CHIP	18K	0.5%	1/10W
R868		1-249-393-11	CARBON	10	5%	1/4W
R869		1-249-381-11	CARBON	1	5%	1/4W
R870		1-216-103-00	RES-CHIP	180K	5%	1/10W
R874		1-215-475-00	METAL	180K	1%	1/4W
R878		1-216-049-11	RES-CHIP	1K	5%	1/10W
R879		1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R880		1-216-097-11	RES-CHIP	100K	5%	1/10W
R881		1-216-085-91	RES-CHIP	33K	5%	1/10W
R882		1-216-073-91	RES-CHIP	10K	5%	1/10W
R883		1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R884		1-216-089-91	RES-CHIP	47K	5%	1/10W
R885		1-216-073-91	RES-CHIP	10K	5%	1/10W
R886		1-216-295-91	SHORT	0		
R887		1-215-477-00	METAL	220K	1%	1/4W
R888		1-215-477-00	METAL	220K	1%	1/4W
R889		1-208-832-11	METAL CHIP	120K	0.5%	1/10W
			<VARIABLE RESISTOR>			
RV300		1-241-769-11	RES, ADJ, CARBON 470K			
			<SWITCH>			
S001		1-692-431-21	SWITCH, TACTILE			
S002		1-692-431-21	SWITCH, TACTILE			
S003		1-692-431-21	SWITCH, TACTILE			
S004		1-692-431-21	SWITCH, TACTILE			
S005		1-692-431-21	SWITCH, TACTILE			
S006		1-692-431-21	SWITCH, TACTILE			
S600	⚠	1-571-433-31	SWITCH, PUSH (AC POWER)			
S800		1-572-707-11	SWITCH, LEVER			

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

A **C**

REF NO.		PART NO.	DESCRIPTION			REMARK
			<#########>			
SWF100		1-781-281-11	FILTER, SURFACE WAVE			
			<TRANSFORMER>			
T503	⚠	1-453-309-21	TRANSFORMER ASSY FLY BACK (NX-4450//M3A4)			
T600	⚠	1-431-747-11	TRANSFORMER, LINE FILTER			
T601	⚠	1-437-332-11	TRANSFORMER, CONVERTER (SRT)			
T800		1-435-374-11	TRANSFORMER, FERRITE (HDT)			
			<THERMISTOR>			
THP600		1-803-744-11	THERMISTOR, POSITIVE			
			<TUNER>			
TU100		8-598-590-00	TUNER, FSS BTP-AA401			
			<CRYSTAL>			
X001		1-577-358-21	VIBRATOR, CERAMIC			
X300		1-567-505-11	OSCILLATOR, CRYSTAL			
X301		1-567-504-11	OSCILLATOR, CRYSTAL			
**********						
	*	A-1332-226-A	C BOARD MOUNTED **********			
		4-382-854-01	SCREW (M3X8), P, SW (+)			
			<CAPACITOR>			
C701		1-115-350-51	CERAMIC	0.0047UF		2KV
C702		1-102-074-00	CERAMIC	0.001UF	10.00%	50V
C703		1-107-651-11	ELECT	4.7UF	20.00%	250V
C704		1-130-202-00	FILM	0.022UF	5.00%	400V
C708		1-102-114-00	CERAMIC	470PF	10.00%	50V
C709		1-102-114-00	CERAMIC	470PF	10.00%	50V
C710		1-102-114-00	CERAMIC	470PF	10.00%	50V
C712		1-102-114-00	CERAMIC	470PF	10.00%	50V
C713		1-102-114-00	CERAMIC	470PF	10.00%	50V
C714		1-102-114-00	CERAMIC	470PF	10.00%	50V
C716		1-126-933-11	ELECT	100UF	20.00%	16V
C717		1-102-106-00	CERAMIC	100PF	10.00%	50V
C718		1-126-933-11	ELECT	100UF	20.00%	16V
C719		1-102-116-00	CERAMIC	680PF	10.00%	50V
C736		1-102-114-00	CERAMIC	470PF	10.00%	50V
C737		1-102-114-00	CERAMIC	470PF	10.00%	50V
C746		1-102-114-00	CERAMIC	470PF	10.00%	50V
			<CONNECTOR>			
CN701	*	1-564-508-11	PLUG, CONNECTOR 5P			
CN702		1-695-915-11	TAB (CONTACT)			
CN703	*	1-564-509-11	PLUG, CONNECTOR 6P			
CN704		1-695-915-11	TAB (CONTACT)			

REF NO.		PART NO.	DESCRIPTION			REMARK
			<DIODE>			
D701		8-719-911-19	1SS119-25			
D702		8-719-911-19	1SS119-25			
D703		8-719-911-19	1SS119-25			
D707		8-719-911-19	1SS119-25			
D708		8-719-911-19	1SS119-25			
D709		8-719-911-19	1SS119-25			
D716		8-719-911-19	1SS119-25			
D717		8-719-070-16	NNCD9.1A-T1			
			<JACK>			
J701	⚠	1-540-071-22	SOCKET, CRT			
			<COIL>			
L701		1-412-529-11	INDUCTOR	22UH		
L706		1-414-191-11	INDUCTOR	150UH		
			<TRANSISTOR>			
Q704		8-729-326-11	2SC2611			
Q705		8-729-326-11	2SC2611			
Q706		8-729-326-11	2SC2611			
Q707		8-729-200-17	2SA1091-O			
Q708		8-729-200-17	2SA1091-O			
Q709		8-729-200-17	2SA1091-O			
Q710		8-729-119-78	2SC2785-HFE			
Q711		8-729-119-78	2SC2785-HFE			
Q712		8-729-119-78	2SC2785-HFE			
			<RESISTOR>			
R703		1-219-752-11	CARBON	100K	5%	1/2W
R705		1-216-365-00	METAL OXIDE	0.47	5%	2W
R710		1-216-486-00	METAL OXIDE	8.2K	5%	3W
R711		1-260-105-11	CARBON	3.3K	5%	1/2W
R712		1-216-486-00	METAL OXIDE	8.2K	5%	3W
R713		1-260-107-11	CARBON	4.7K	5%	1/2W
R714		1-216-486-00	METAL OXIDE	8.2K	5%	3W
R715		1-260-107-11	CARBON	4.7K	5%	1/2W
R716		1-249-417-11	CARBON	1K	5%	1/4W
R717		1-249-417-11	CARBON	1K	5%	1/4W
R718		1-249-417-11	CARBON	1K	5%	1/4W
R725		1-249-424-11	CARBON	3.9K	5%	1/4W
R726		1-249-424-11	CARBON	3.9K	5%	1/4W
R727		1-249-424-11	CARBON	3.9K	5%	1/4W
R728		1-249-408-11	CARBON	180	5%	1/4W
R729		1-249-408-11	CARBON	180	5%	1/4W
R730		1-249-408-11	CARBON	180	5%	1/4W
R731		1-249-399-11	CARBON	33	5%	1/4W
R732		1-249-399-11	CARBON	33	5%	1/4W
R733		1-249-399-11	CARBON	33	5%	1/4W
R734		1-219-743-11	CARBON	100	5%	1/2W
R738		1-247-807-31	CARBON	100	5%	1/4W
R739		1-247-807-31	CARBON	100	5%	1/4W
R740		1-247-807-31	CARBON	100	5%	1/4W

The components identified by shading and mark ⚠ are critical for safety.
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C **F**

REF NO.		PART NO.	DESCRIPTION			REMARK
			<VARIABLE RESISTOR>			
RV702		1-241-656-11	RES, ADJ, METAL FILM 110M			
**********						
	*	A-1400-175-A	F BOARD MOUNTED			
			**********			
		1-533-223-11	CLIP, FUSE			
	*	4-374-846-01	COVER, CAPACITOR, CAP TYPE			
			<CAPACITOR>			
C4601	⚠	1-115-165-11	FILM	0.1UF	20.00%	275V
C4602	⚠	1-117-703-51	CERAMIC	0.0047UF	99%	250V
			<CONNECTOR>			
CN4601		1-580-843-11	PIN, CONNECTOR (POWER)			
CN4602		1-580-843-11	PIN, CONNECTOR (POWER)			
CN4603		1-695-915-11	TAB (CONTACT)			
			<FUSE>			
F4601	⚠	1-576-016-11	FUSE, CYLINDRICAL (TIME-LAG)			3.15A/250V
			<RESISTOR>			
R4601	⚠	1-202-885-91	SOLID	1M	10%	1/2W

REF NO.		PART NO.	DESCRIPTION	REMARK
			<TRANSFORMER>	
T4601	⚠	1-435-214-11	TRANSFORMER, LINE FILTER	
T4602	⚠	1-435-214-11	TRANSFORMER, LINE FILTER	
			<VARISTOR>	
VDR461		1-801-451-51	VARISTOR TNR14V271K660	
**********				
			ACCESSORIES AND PACKING MATERIALS	
			**********	
	*	4-377-015-01	BAG, PROTECTION	
	*	4-083-188-01	CUSHION, LOWER	
	*	4-083-189-01	CUSHION, UPPER	
	*	4-085-963-01	INDIVIDUAL CARTON	
		4-086-174-11	MANUAL, INSTRUCTION	
**********				
			BATTERY COVER REMOTE COMMANDER	
			**********	
		1-418-417-21	REMOTE COMMANDER (RM-915)	
		9-939-697-01	BATTERY COVER REMOTE COMMANDER	

Sony Corporation
Sony Technology Malaysia Sdn. Bhd.
Visual Products General Area

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